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IX. No. 14 October 30, 1906

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# The University of Minnesota Bulletin

# The College of Homeopathic Medicine and Surgery

## *Announcement, 1906-1907*

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THE REGISTRAR,
The University of Minnesota,
Minneapolis, Minnesota.

# The University

The University of Minnesota comprises the following named colleges, schools, and departments:

- The Graduate School
- The College of Science, Literature and the Arts
- The College of Engineering and the Mechanic Arts
- The School of Mines
- The School of Analytical and Applied Chemistry
- The College of Education
- The University Summer School
- The Department of Agriculture
  - The College of Agriculture
  - The School of Agriculture
  - Short Course for Farmers
  - The Dairy School
  - The Crookston School of Agriculture
  - The Experiment Stations:
    - The Main Station at St. Anthony Park
    - The Sub-Station at Crookston
    - The Sub-Station at Grand Rapids
- The College of Law
- The College of Medicine and Surgery
- The Six-Year Medical Course
- The College of Homeopathic Medicine and Surgery
- The College of Dentistry
- The College of Pharmacy
- The Geological and Natural History Survey

In the College of Science, Literature and the Arts, there is a four-year course of study leading to the degree, Bachelor of Arts. The work of the first year is elective within certain limitations as to the range of subjects from which the electives may be chosen. The remaining work of the course is entirely elective, with the provision that a certain number of long courses be selected. The course is so elastic that it permits the student to make the general scope of his course classic, scientific or literary, to suit his individual purpose.

The College of Engineering and the Mechanic Arts offers courses of study, of four years each, in civil, mechanical, electrical and municipal engineering, leading to the degrees of Civil, Mechanical, Electrical and Municipal Engineer. This college offers a four-year course of study in science and technology, leading to the degree of Bachelor of Science, with an additional year leading to the engineer's degree in any one of the various lines offered in the college. This college also offers graduate work leading to the degree Master of Science.

THE SCHOOL OF MINES offers four-year courses of study in mining and metallurgy upon completion of which the degrees, engineer of mines and metallurgical engineer, are conferred.

THE SCHOOL OF ANALYTICAL AND APPLIED CHEMISTRY, leading to the degrees Analytical Chemist and Chemical Technologist, offers two courses of study of four years each in analytical and applied chemistry.

THE COLLEGE OF EDUCATION receives students who have completed two years of college work, and offers them a three-year course leading to the master's degree. At the end of the second year students may receive the bachelor's degree and the University teacher's certificate. Graduates of other colleges, who have pursued an equivalent course in education, may enter for the master's degree.

THE GRADUATE SCHOOL gathers into a single organization and unites for the purposes of administration all the activities of the University in all its schools and colleges in so far as they relate to advanced instruction offered for the second or higher degrees, viz.: Master of Arts and Doctor of Philosophy conferred for advanced, non-technical study; Master of Science and Doctor of Science for technical study; Master of Laws and Doctor of Civil Law for advanced legal studies. The privileges of this school are in general open to all Bachelors of Arts, of Science, pure and applied, and of Laws, from reputable colleges and universities having courses substantially equivalent to those at this university.

THE UNIVERSITY SUMMER SCHOOL is organized for a six weeks session in June and July under the direction of the State Department of Public Instruction. In the elementary section courses are given for teachers in all the common school branches and in preparation for the state teachers' certificates. In the college section courses are given for high school teachers and in preparation for the state professional certificate. Students who desire University entrance credits and credits toward the bachelor's degree may secure these by pursuing not more than two full courses at each session.

SPECIAL COURSES. In each of the Colleges, students of mature age and adequate preparation are permitted to pursue, under the direction of the faculty, one or two distinct lines of study.

EXTENSION LECTURES. Professors in the University are prepared to give a limited number of extension lectures from time to time. For subjects, speakers, terms and dates, application should be made to the Chairman of the Committee on University Extension.

THE COLLEGE OF AGRICULTURE offers a four-year course in agriculture The degree of Bachelor of Science, in Agriculture, is conferred on completion of the course. Students in this College may specialize along the line of forestry or of home economics and secure the degree Bachelor of Science (in Forestry, or in Home Economics).

THE SCHOOL OF AGRICULTURE offers a three-years course of study and is a training school for practical farm life and in domestic economy. The College of Agriculture is open to graduates of this School who have completed the fourth year of work required for admission to the college.

*The Dairy School* offers practical instruction in dairying, specially designed for those who are actually engaged in the manufacture of butter and cheese.

*The Short Course for Farmers* is designed to be of the greatest help possible to those actually engaged in farming.

*The Crookston State School of Agriculture* offers a course of study quite similar to that given in the School of Agriculture.

THE COLLEGE OF LAW offers a three-years course of instruction leading to the degree of Bachelor of Laws. Graduate work leading to the degrees, Master of Laws, and Doctor of Civil Laws is offered. An evening class is provided in this college.

THE COLLEGE OF MEDICINE AND SURGERY AND THE COLLEGE OF HOMEOPATHIC MEDICINE AND SURGERY offer four-year courses of study, of nine months each. Upon completion of either of the prescribed courses the degree, Doctor of Medicine is conferred.

In the Colleges of Science, Literature and the Arts, of Medicine and Surgery, and of Homeopathic Medicine and Surgery, there has been established a combined course of six years, leading to the degrees, Bachelor of Science, and Doctor of Medicine.

THE COLLEGE OF DENTISTRY offers a three-years course of study, of nine months each. Upon completion of the prescribed course the degree of Doctor of Dental Surgery is conferred.

THE COLLEGE OF PHARMACY offers a two- or three-years course of study leading to the degree of Pharmaceutical Chemist. This college also offers graduate work leading to the degrees. Master of Pharmacy and Doctor of Pharmacy.

# Historical

AN ACT to re-organize and provide for the goverment and regulation of the University of Minnesota, and to establish an Agricultural College therein.

As amended by Chapter X of the General Laws of 1872:

AN ACT to amend Chapter I of the Session Laws of 1868, relating to the University of Minnesota.

Section 1. The object of the University of Minnesota, established by the Constitution at or near the Falls of St. Anthony, shall be to provide the means of acquiring a thorough knowledge of the various branches of literature, science and the arts, and such branches of learning as are related to agriculture and the mechanic arts, including military tactics and other scientific and classical studies.

Sec. 2. There shall be established in the University of Minnesota five or more colleges or departments, that is to say, a College of Science, Literature, and the Arts, a College of Agriculture, including "military tactics," a College of Mechanic Arts, a college or Department of Law, and also a College or Department of Medicine. The Department of Elementary Instruction may be dispensed with at such a rate and in such wise as may seem just and proper to the Board of Regents.

Sec. 3. The government of the University shall be vested in a board of ten Regents of which the Governor of the State, the State Superintendent of Public Instruction, and the President of the University, shall be members ex-officio and the remaining seven members thereof shall be appointed by the Governor, by and with the advice and consent of the Senate. Whenever a vacancy occurs therein, for any cause, the same shall be filled for the unexpired term in the same manner. Of the Regents thus appointed, two shall be commissioned and hold their offices for one year, and two for two years, and three for three years. Their successors shall be appointed in a like manner, and shall hold their offices for the full term of three years from the first Wednesday of March succeeding their appointment and until their successors are appointed and qualified. The President of the University shall have the same rights, powers and privileges as other members, *except the right of voting, and shall be, ex-officio, the Corresponding Secretary of the Board of Regents.

Sec. 4. The Regents of the University shall constitute a body corporate, under the name and style of "The University of Minnesota," and by that name may sue and be sued, contract and be contracted with, make and use a common seal and alter the same at pleasure; a majority of the voting members shall constitute a quorum for the transaction of business, and a less number may adjourn from time to time.

Sec. 5. The Board of Regents shall elect from the members of the

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*By the later act the President has been given a vote.

Board, a President of the Board; (a) Recording Secretary and (a) Treasurer, who shall hold their respective offices during the pleasure of the Board. And the President and Treasurer each before entering upon the duties of his office, shall execute a bond in the penal sum of fifty thousand dollars, with at least two sufficient sureties, to the State of Minnesota, to be approved by the Governor, conditioned for the faithful and honest performance of the duties of his office according to law, which bonds, when so approved, shall be filed at the office of the Secretary of State.

Sec. 6. The Board of Regents shall have the power, and it shall be their duty, to enact by-laws for the government of the University of Minnesota in all its departments; to elect a President of the University, and in their discretion a Vice-President, and the requisite number of professors, instructors, officers and employes, and to fix their salaries, (and) also the term of office of each, and to determine the moral and educational qualifications of applicants for admission, and in the appointment of professors, instructors and other officers, and assistants of the University, and in prescribing the studies and exercise thereof; and in all the management and government thereof, no partiality or preference shall be shown to one sect or religious denomination over another; nor shall anything sectarian be taught therein. And the Board of Regents shall have the power to regulate the course of instruction, and (to) prescribe the books and authorities to be used, and also to confer such degrees and grant such diplomas as is usual, in their discretion. It shall be the duty of the Recording Secretary to record all the proceedings of the Board, and carefully preserve all its books and papers; and before entering upon the duties of his office he shall take and subscribe an oath to perform his duties honestly and faithfully as such officer. It shall be the duty of the Treasurer to keep an exact and faithful account of all moneys, bills receivable and evidence of indebtedness, and all securities of property received or paid out by him, and before entering upon his duties shall take and subscribe an oath that he will well and faithfully perform the duties of Treasurer thereof. It shall be the duty of the President to preside at the meetings of the Board; and, in case of his inability to preside, the Board may appoint a President pro tempore.

Sec. 7. In addition to all the rights, immunities, franchises and endowments heretofore granted or conferred upon the University of Minnesota, for the endowment, support and maintenance thereof, there shall be and is hereby inviolably appropriated and placed at the disposal of the Board of Regents thereof, to be drawn from the State treasury upon the order of the President, drawn upon the State Auditor, countersigned by the Secretary of the Board, and payable to the order of the Treasurer of the Board, all the interest and income of the fund to be derived from the sale of all lands granted and to be granted to the State of Minnesota by virtue of an act of Congress, entitled "An act donating lands to the several States and Territories which may provide colleges for the benefit of agriculture and the mechanic arts," approved July 2d, 1867, and also all such gifts, grants and contributions to the endowment thereof as may be derived from any and all such sources.

Sec. 8. And in order to effect a settlement of all remaining indebtedness of the University, all the powers and authorities given by Chapter 18 of the laws of 1864, entitled "An act relating to the University of Minnesota," and Chapter 11 of the laws of 1866, entitled "An act to amend an act.

relating to the University of Minnesota, approved March 4, 1864," to the Regents therein mentioned, are hereby given to and conferred upon the Board of Regents of the University of Minnesota aforesaid, and the said acts are hereby continued and shall be in force until such outstanding indebtedness is fully liquidated.

Sec. 9. The first meeting of the first Board of Regents under the provisions of this act, shall be holden at the University building on the first Wednesday in March, 1868, at which meeting the officers of the Board shall be elected, and the annual meetings of the Board shall be holden on the second Tuesday in December in each and every year thereafter.

Sec. 10. Any person or persons contributing a sum of not less than fifteen thousand dollars shall have the privilege of endowing a professorship in the University, the name and object of which shall be designated by the Board of Regents.

Sec. 11. The said Board of Regents shall succeed to and have control of the books, records, buildings, and all other property of the University; and the present Board of Regents shall be dissolved immediately upon the organization of the Board herein provided for. Provided, that all contracts made at that time, binding upon the Board then dissolved, shall be assumed and discharged by their successors in office.

Sec. 12. It shall be the duty of the Board of Regents herein provided for, to make arrangements for securing suitable lands, pursuant to the act of Congress, above mentioned, in the vicinity of the University, for an experimental farm, and as soon thereafter as may be to make such improvements thereon as will render the same available for experimental purposes in connection with the course in the agricultural college; and for such purposes, the Board of Regents is hereby authorized to expend a sum not exceeding the amount specified by the act of Congress aforesaid.

Sec. 13. On or before the second Tuesday in December in each and every year, the Board of Regents, through their President, shall make a report to the Governor, showing in detail the progress and condition of the University during the previous University year, the wants of the institution in all its various departments—the nature, costs and results of all improvements, experiments and investigations, the number of professors and students—the amount of money received and disbursed—and such other matters, including industrial and economic statistics, as they deem important or useful. One copy of said report shall be transmitted to each of the other colleges endowed under the provisions of the said act of Congress, and one copy to the Secretary of the Interior.

Sec. 14. The President of the University shall be the President of the General Faculty, and of the special faculties of the several departments or colleges, and the executive head of the institution in all its departments. As such officer, he shall have authority, subject to the Board of Regents, to give general direction to the practical affairs and scientific investigations of the University, and in the recess of the Board of Regents to remove any employe or subordinate officer not a member of the Faculty and supply for the time being any vacancies thus created. He shall perform the customary duties of a corresponding secretary, and may be charged with the duties of one of the professorships. He shall make to the Superintendent of Public Instruction, on or before the second Tuesday in December in each and every year, a report showing in detail the progress and condition of the University during the previous University year—the number of professors and students in the several departments—and such other matters relating to the proper educational work of the institution as he shall deem useful. It shall be the duty of the President of the University to make to the Board of Regents, on or before the second Tuesday in December in each and every year, a report showing in detail the progress and condition of the University during the previous University year—the nature and results of all important experiments and investigations and such other matters, including economic and industrial facts and statistics, as he shall deem useful.

Sec. 15. Chapter eighty of the laws of eighteen hundred and sixty, chapter eighty-seven of the laws of eighteen hundred and sixty-two, and so much and such parts of any and all acts and laws, whether general or special, as are inconsistent with the provisions of this act, are hereby repealed.

Sec. 16. This act shall take effect and be in force from and after its passage.

Approved February 18, 1868. Act to amend approved February 29. 1872.

# The Board of Regents

| | |
|---|---|
| CYRUS NORTHROP, LL. D., MINNEAPOLIS<br>The President of the University | *Ex-Officio* |
| The HON. JAMES T. WYMAN, MINNEAPOLIS<br>The President of the Board | 1907 |
| The HON. JOHN A. JOHNSON, ST. PETER<br>The Governor of the State | *Ex-Officio* |
| The HON. JOHN W. OLSEN, ALBERT LEA<br>The State Superintendent of Public Instruction | *Ex-Officio* |
| The HON. STEPHEN MAHONEY, MINNEAPOLIS | 1907 |
| The HON O. C. STRICKLER, NEW ULM | 1907 |
| The HON. S. G. COMSTOCK, MOORHEAD | 1909 |
| The HON. THOMAS WILSON, ST. PAUL | 1909 |
| The HON. B. F. NELSON, MINNEAPOLIS | 1909 |
| The HON. A. E. RICE, WILLMAR | 1909 |
| The HON. EUGENE W. RANDALL, MORRIS | 1910 |
| The HON. DANIEL R. NOYES, ST. PAUL | 1910 |

C. D. DECKER, AUSTIN
Secretary of the Board

# Executive Officers

## THE UNIVERSITY

CYRUS NORTHROP, LL.D., *President*
ERNEST B. PIERCE, B.A., *Registrar*
C. D. DECKER, *Purchasing Agent and Secretary of the Board of Regents*

## THE COLLEGES

JOHN F. DOWNEY, M.A., C.E., *Dean of the College of Science, Literature and the Arts*
FREDERICK S. JONES, M.A., *Dean of the College of Engineering and the Mechanic Arts*
WILLIAM R. APPLEBY, M.A., *Dean of the School of Mines*
GEORGE B. FRANKFORTER, PH.D., *Dean of the School of Chemistry*
GEORGE F. JAMES, Ph.D., *Dean of the College of Education*
HENRY T. EDDY, C.E., Ph.D., L.L.D. *Dean of the Graduate School*
WILLIAM M. LIGGETT, *Dean and Director of the Department of Agriculture*
WILLIAM S. PATTEE, LL.D., *Dean of the College of Law*
FRANK FAIRCHILD WESBROOK, M. A., M. D., C. M., *Dean of the College of Medicine and Surgery*
EUGENE L. MANN, B.A., M.D., *Dean of the College of Homeopathic Medicine and Surgery*
ALFRED OWRE, D.M.D., M. D., *Dean of the College of Dentistry*
FREDERICK J. WULLING, PHM.D., LL.M., *Dean of the College of Pharmacy*

## LIBRARIES AND MUSEUMS

JAMES T. GEROULD, B. A., *Librarian*
LETTIE M. CRAFTS, B.L., *Assistant Librarian*
INA FIRKINS, B.L., *Library Assistant*
MARY S. MCINTYRE, B.S., *Librarian of School of Agriculture*
THOMAS G. LEE, B.S., M.D., *Librarian of Department of Medicine*
HUGH E. WILLIS, LL.M., *Librarian of the College of Law*
CHRISTOPHER W. HALL, M.A., *Curator Geological Museum*
HENRY F. NACHTRIEB, B.A., *Curator of the Zoölogical Museum*

## BUILDINGS AND GROUNDS

ALLEN W. GUILD, *Superintendent of Buildings*
EDWIN A. CUZNER, *Superintendent of Grounds*

# The University Council

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At the regular meeting of the Board of Regents of the University May 31st, 1905, a University Council was established according to the following plan:

I. The name of the body shall be the University Council. It shall consist of the President of the University, the Deans of the various colleges and schools, one elected representative from each college or school for each four hundred students or major fraction thereof, and one representative of the general alumni association.

II. The elected members shall serve for a period of one year. They shall be chosen by the various faculties at the time of the selection of standing committees. The representative of the general alumni association shall be chosen by that body at its annual meeting from among the alumni who are not members of the University.

III. The Council shall be authorized to—

a) Appoint the following committees or the faculty representation thereon:

The University auditing committee
The University press committee
The committee on athletics
The committee on University relations to other institutions of higher learning
The committee on health and sanitation
The committee on commencement and other University functions
The committee on catalogue, programs and courses of study
The committee on student entertainments and social affairs

and such other such committees as the general University interests may require.

b) Receive reports from such committees and to make such recommendations as may be required.

c) Consider and act upon any matter of general University interest beyond the province of a single faculty which may be referred to it by the President of the University or any faculty.

IV. The Council shall hold stated meetings upon the first Monday of October, December, April and June, and such other meetings as the President of the University may call.

# Representatives to the Council

*The College of Science, Literature and Arts*
Dean John F. Downey
Professor F. L. McVey
Professor Willis M. West
Professor H. F. Nachtrieb

*The College of Engineering*
Dean F. S. Jones
Professor George D. Shepardson

*The School of Mines*
Dean Wm. R. Appleby

*The School of Chemistry*
Dean Geo. B. Frankforter

*The College of Education*
Dean Geo. F. James

*The Graduate School*
Dean H. T. Eddy

*The College of the School of Agriculture*
Dean Wm. M. Liggett
Professor Harry Snyler

*The College of Law*
Dean Wm. S. Pattee
Judge A. C. Hickman

*The College of Medicine and Surgery*
Dean F. F. Wesbrook
Professor Thomas G. Lee

*The College of Homeopathic Medicine and Surgery*
Dean Eugene L. Mann

*The College of Dentistry*
Dean Alfred Owre

*The College of Pharmacy*
Dean Frederick John Wulling

*General Alumni Association*
Mayor David P. Jones

# University Council Committees

***The University Auditing Committee***
Professors Anderson, Sigerfoos, Springer, Fletcher, Owre.

***The Committee on Athletics***
Professors Wesbrook, Paige, Brooke, West, Harding.

***The Committee on Grounds and Sanitation***
Professors Wesbrook, Reynolds, Bass, Flather, Sidener.

***The Committee on Catalogue, Programs and Courses of Study***
Professors Frankforter, McVey, Pattee, Jones, Snyder, Appleby, Lee

***The Press Committee***
Professors Schaper, Erdmann, Constant, Snyder, James.

***The Committee on Commencement and other University Functions***
Professors Nachtrieb, Pattee, Eddy, Lee, Owre, Washburn, Schlenker.

***The Committee on Student Entertainments and Social Affairs***
Professors Frankforter, Pike, White (S. M.), Bass, Willis.

***The Committee on University Relations to other Institutions of Higher Learning***
Professors Downey, Folwell, Green, Lee, MacMillan.

***The Committee on University Extension and University Lectures***
Professors James, MacMillan, Mann, Hecker, McVey.

***The Committee on the Library***
Professors Eddy, Downey, Jones (D. P.), West, Lee, Jones (F. S.), Fletcher.

# CALENDAR FOR 1906-1907

## 1906

### JULY

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## 1907

### JANUARY

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# Equipment

## GROUNDS AND BUILDINGS

The University campus comprises about forty-five acres lying between University avenue and the river and between Eleventh and Nineteenth avenues Southeast. The campus is well wooded with a fine growth of native oaks and commands a beautiful view of St. Anthony Falls and the city, but is sufficiently removed from the business center of the city to insure desirable quiet and retirement. The buildings upon the campus number twenty, and are valued at over $800,000. A special clinical building for the use of the department of medicine is located in the southern part of the city, where there is an abundance of clinical material, and within easy reach of the University. The campus is valued at about $450,000 and the equipment of the buildings at about $300,000.

The State Experimental Farm, upon which are located the buildings of the experiment station and the department of agriculture, consists of over two hundred and fifty acres of very valuable land, half way between the twin cities and within a thirty-minutes' ride of either city. The farm is valued at $400,000, and the sub-stations located at Crookston and Grand Rapids, at $30,000 more. The buildings and equipment of the department of agriculture are valued at over $400,000.

## NEW BUILDINGS.

The Legislature of 1905 appropriated $350,000 for the erection of a "Main Building," of which $200,000 is available in 1906, and $150,000 will be available in 1907: this amount will be supplemented by $60,000 received from insurance on the Old Main Building, destroyed by fire in September, 1905. This will give a total for building and equipment of $410,000.

The building is now in process of construction. It will be 322 feet in length and three stories in height above the basement, with rooms arranged on both sides of straight halls extending through the length of the building. It will provide class and seminar rooms, and offices for the departments of Astronomy, Mathematics, Greek, Latin, German, French, and Spanish, Scandinavian, Comparative Philology, Rhetoric and Oratory, Philosophy and Psychology, and Education. It will also contain the Scandinavian Museum, German Museum, Psychological Laboratory, Dean's Office, Faculty Parlor, Postoffice, Hall for Literary Societies, Men's Study Hall, Women's Study Hall, Minnesota Daily, Minnesota Magazine, Gopher, Cloak Rooms, Janitors' Rooms, Toilet Rooms, Work Shop, and Store Rooms.

The material is brick with cut stone trimmings.

The Legislature of 1903 appropriated the sum of $100,000 for the erection of a building for pathology, bacteriology and hygiene. The building, which is known as the Institute of Public Health and Pathology, has been erected with the general group of medical buildings and will be ready for occupancy for the year 1906-07. It is 213 feet long by 100 feet deep in the central portion and consists of the central main portion, 60x100 feet, with north and south wings each 56x75 feet.

Space is provided on three floors for a museum and library. A Pasteur Institute is housed in this building for the treatment of and research in hydrophobia. The two large laboratories for teaching pathology, bacteriology and public health and numerous offices, private and research laboratories and a large amphitheatre are arranged with special attention to efficiency and convenience. The State Board of Health Laboratories are housed here in the end of the building adjacent to the special laboratory built by that Board some years ago. Photographic laboratories, workshops, cold storage and autopsy rooms are provided.

## GIFTS MADE TO THE UNIVERSITY.

The will of the late Mrs. A. F. Elliott, formerly of Minneapolis, but more recently of California, left a bequest to the University, from which the Regents expect to realize at least $125,000.00. The heirs have requested that this fund be used to erect a Hospital in connection with the Medical Department of the University.

The Hon. Thomas H. Shevlin has donated to the University $60,000 for a "Woman's Building," to be known as the "Alice Shevlin Hall." The gift has been accepted by the Regents, and the building is now being erected on the site of the "Old Main" between the Library and Law buildings. It will be a two-story and basement structure, the material used being pressed brick with stone trimmings. It will have a frontage of 114 feet on Pillsbury Avenue and a depth of 55 feet. The purpose of this building is to furnish suitable rest and study rooms for the women attending the University. The building will contain several Society Rooms, a large Lunch Room, and a general Reception Hall, all of which are greatly needed. It is expected that the building will be ready for occupancy at the commencement of the next college year, September 1st.

## THE FINANCIAL MANAGEMENT OF THE UNIVERSITY.

The financial management of the University is in the hands of the "Board of Regents," except in the erection of new buildings, the purchasing of fuel, and the placing of insurance on buildings and contents, which are in the hands of the State Board of Control.

## UNIVERSITY REVENUES.

The sources of the University income for Current Expense are three, viz: 1st, the United States Government; 2nd, the State, and 3rd, the University.

The U. S. Government gave to each of the States certain lands for educational purposes. The proceeds of these lands, as fast as sold, are invested in state bonds. These bonds are known as the University permanent fund, and at present amount to $1,400,000. The annual interest on these bonds is at present about $53,000. In addition to the interest on bonds, the University receives from the government the Hatch Bill appropriation of $15,000.00, an appropriation for the benefit of the Experiment Station, and the Morrill Bill appropriation of $25,000.00, an appropriation for the encouragement of the Departments of Agriculture, Mechanic Arts, and Military Science.

## RECAPITULATION.

| | | |
|---|---|---|
| Interest on Bonds and land contracts | $53,000.00 | |
| U. S. Government, Hatch Bill appropriation | 15,000.00 | |
| U. S. Government, Morrill Bill appropriation | 25,000.00 | |
| Total from the Government | | $ 93,000.00 |
| The University receives from the State an appropriation of 23-100 of one mill per dollar on a valuation of $846,000,000, which will give about | $194,000.00 | |
| A flat appropriation called a deficiency appro. of | 60,000.00 | |
| An appropriation for support of School of Mines | 5,000.00 | |
| An appropriation for salaries of Mines and Elec. Eng. | 4,500.00 | |
| Total from the State | | $263,500.00 |

| | | |
|---|---|---|
| Amount received from Student's fees | $126,000.00 | |
| Dental Infirmary receipts | 12,000.00 | |
| Station & School, sales and fees | 14,000.00 | |
| Miscellaneous Receipts, University | 2,000.00 | |
| Total from University | | $154,000.00 |
| Total estimated current expense receipts for 1906 | | $510,000.00 |

## LIBRARIES

The following libraries are easily accessible to the University students:

Minneapolis—The University Libraries, 110,000 volumes; the Public Library, 135,000 volumes; the Minneapolis Bar Association, the Guaranty Loan Law, and the New York Life Insurance Law Libraries, numbering a total of about 30,000 volumes, are open under certain restriction to law students; the Minnesota Academy of Natural Sciences, 12,000 titles.

St. Paul—The State Historical Library, 78,000 volumes; the State Library, 35,000 volumes; Public Library, 55,000 volumes.

The University Library consists of:

1. *The General Library.*
2 *College Libraries,* including those in Law, Medicine, Engineering, Agriculture.
3. *Departmental Libraries,* including those in Art, Astronomy, Animal Biology, Botany, Chemistry, French, Geology, German, Greek and Latin, Histology and Embryology, History, Mathematics, Military Science, Pathology and Bacteriology, Pedagogy, Physics, Physiology, Rhetoric, Scandinavian.

The private collections of professors are available when necessary for research.

The whole number of bound volumes owned by the University is about 15,000. Unbound books and pamphlets, about 30,000. About 500 current periodicals are received in the general and other libraries.

The departmental libraries consist mainly of books of reference and current periodicals relating to technical subjects.

The general library is open to students and the public from 8:00 a.m. to 9:30 p.m., every day of the University year, except Sundays and legal holidays.

The Law Library contains nearly all the English Reports, including those of Canada, from the earliest decisions down to the year 1900; nearly all the reports of the different states of the Union; all the reports of the United States Supreme court, and all the Federal Court reports. It contains also the digests of these reports and an excellent selection of standard text-books and law dictionaries.

The Nelson Law Library is a rare collection of fifteen hundred volumes, donated to the University by the Honorable R. R. Nelson, of St. Paul, upon retirement from the Federal bench. It contains many old English reports, in addition to those already mentioned, and many ancient treatises upon common law.

A rare and unique addition to the Law Library has been secured by the donation of Judge Collins and former Attorney-General Childs to the University of all the Briefs and Paper-Books in the cases argued in the Supreme Court of Minnesota since 1888, making a fine collection of over five hundred bound volumes.

The Medical Library contains a large and well assorted collection of books, sets of journals, bound and unbound pamphlets, relating to all branches of medicine. All of the leading medical journals are on file in the reading room. The various laboratories have also reference libraries devoted to their special lines of work.

The library was greatly enriched by the bequest of the late Dean, Perry H. Millard, M. D, who bequeathed his entire private medical library to the department. This collection consists of several hundred volumes and pamphlets, including many rare and old medical works, sets of journals especially rich in surgical works.

To all these library facilities may be added the Minneapolis Public Library, which is within easy reach of the University and is opened freely to the students of the University. This library contains over one hundred twenty-five thousand bound volumes and over fourteen hundred of the leading newspapers, magazines and periodicals of the world.

## MUSEUMS.

The museums of the University contain material obtained from various sources, arranged with special reference to its use for illustration. Among the more notable collections are the following:

(a) *In Geology and Mineralogy.* The Kunz collection of minerals, purchased of George F. Kunz; several suites of crystalline rocks secured from various sources; The Ward collection of casts contributed in part by citizens of Minneapolis; collections of the rocks, fossils, minerals and economic products of Minnesota; upwards of 9,000 entries gathered by the geological survey of the State; the Sardeson collection of paleozoic fossils of Minnesota, Wisconsin, Iowa and neighboring states, comprising 30,000 specimens; a series of 3,000 thin sections of typical rocks and minerals largely representing Minnesota localities; purchased material comprising a fine collection of crystals; 5,000 minerals and 3,000 specimens of economic minerals and crystalline rocks, and a collection of over 4,000 photographs and lantern slides.

(b) *In Zoölogy:* All the material collected by the State Zoölogist, a collection of mounted Minnesota birds representing about one-third of the species found in the State; a number of the mammals of the State and a few from the more western states; a collection of fishes, molluscan shells, corals and other foreign material.

The ornithological room contains the excellent Thomas S. Roberts and Franklin Benner collection of skins, nests and eggs of Minnesota birds. Other groups of animals are more or less numerously represented, and are receiving annual additions from the Zoölogical Survey.

(c) *In Botany*: The general herbarium numbering about 25,000 specimens and comprising the series of plants collected by the State Botanist; an alcoholic collection of material for dissection; a collection of woods of Minnesota; a limited series of carboniferous and cretaceous fossil plants, including the Lesquereaux collection from the Minnesota River localities.

(d) *In Technology*: A cabinet of specimens illustrating the products and processes of applied chemistry is being collected by the Professor of Chemistry, as opportunity offers. The collection embraces fuel, ores, furnace products, textile materials, both raw and manufactured, dyewoods and other materials used in dyeing; specimens illustrating the bleaching and printing of cotton, linen and woolen goods, earthenware, pottery, etc.

(e) *In Classics*: Some material illustrating classical geography, topography. chronology, mythology, archaeology, and art has been collected, consisting mainly of plans and charts, casts, pictorial illustrations, facsimiles of manuscripts and inscriptions.

(f) *In English:* A few fac-similes of manuscripts, plates that may serve for the purpose of archaeological instruction, publication of texts, reprints of blackletter books and of original editions, photographs and portraits have been gathered.

(g) *In Civil Engineering*: The department is collecting samples of road material typical of the various localities of the State, and leading materials used in street paving, such as granite, trap rock, brick and asphaltum. A set of standard sections of steel and wrought iron is provided for illustration in the study of structural design..

(h) *In Mechanical Engineering*: The collection consists of models of mechanical motions especially relating to the work in kinematics; sectioned apparatus, such as injectors, water meters and steam separators; various collections of drop forging in iron, steel and copper; miscellaneous samples of commercial work representing the product of special machines; groups of standard nuts, bolts and screws; samples of belting, ropes, steel and iron cables, rawhide gears, and other material especially useful for illustrative purposes.

(i) *In Electrical Engineering Museum*: This museum contains a growing collection of samples furnished by various manufacturers and dealers for demonstrating the merits of different products and for illustrating modern practice; an excellent collection showing the development of electrical instruments, lightning arresters, switches, primary and secondary batteries, early forms of dynamos and motors, lighting apparatus and various industrial applications of electricity; also a collection of samples from repair shops and elsewhere, illustrating the effects of wear, accidents and abuse.

(j) *In Engineering Mathematics*: This department has recently added to its apparatus used for illustration in teaching, several types of slide rules, including those of Thatcher, Faber, Keuffel and Esser, Schureman's Computer, Boucher's Calculator; also Amsler's Polar Planimeter.

*In Mathematics*: The Schroeder wooden and the Schilling gypsum, string and paper models for Solid Analytical Geometry, many of the Schilling models for illustrating the Theory of Surfaces, several of the Schilling mechanical devices for describing various loci, the Keufel and Esser models for Solid Geometry, and large slated globes, suitably mounted, for use in Spherical Geometry and Spherical Trigonometry.

## ASTRONOMICAL OBSERVATORY.

The students' astronomical observatory contains a ten and one-half inch combined, visual, photographic and spectroscopic refracting telescope, constructed by Warner Swasey and Brashear; a photographic clock.

## GYMNASIUM.

The Gymnasium is located in the Armory, and is well equipped with a variety of gymnastic appliances. The object of the Gymnasium is to provide all of the students of the University opportunity for exercise to build up their general health. It also provides special training to correct physical defects and functional derangements. The gymnasium is in charge of a professional Medical Director and Assistant and the training is under their direct supervision. A thorough physical examination is offered each student immediately before and after the gymnasium course, and a record is made of the same. The examination of these records shows a marked improvement in the standard of health of the average student during his college course. The Gymnasium is open at all times to all young men in the University who are free to use the apparatus and to pursue a course of physical training under the direct supervision of the Director and his assistant. In some of the Colleges of the University, this work is required of all men.

# Organizations and Publications

## RELIGIOUS.

*The Students Christian Association* was organized in 1869, its object being to promote growth in Christian character, and to engage in such religious work as may be deemed expedient and necessary.

The Association owns a commodious building, which serves as the headquarters for student religious activity. All persons in sympathy with the object of the association are eligible to membership.

*The Young Men's Christian Association* has as its object the promotion of "growth in grace and Christian fellowship among its members and aggressive Christian work, by and for students." This association leases the Students' Christian Association building and keeps it constantly open, with a General Secretary in charge. All men in sympathy with the object of the association are eligible to membership. This building is maintained as the social and religious headquarters of all young men in the University.

instruction.

The General Secretary will be pleased to correspond with any young man intending to come to the University. Any inquiry about board, room, employment, or general information will gladly be answered, and a handbook will be sent to anyone wishing it. Address the General Secretary of the Young Men's Christian Association, University of Minnesota, Minneapolis, Minnesota.

*The Young Women's Christian Association* is the center of Christian life among the young women of the University. Its object is "to deepen spiritual thought in the University woman, to environ her with a semblance of home, to bring to her friendship, assistance and sociability by stimulating student fellowship, to give her personal help when necessary; thus developing in her the Christ ideal of culture in womanhood."

To this end frequent socials and informal teas are given throughout the year; twice each week twenty minute prayer meetings are held, a dozen circles meet one hour a week for devotional Bible study; and from time to time missionary meetings are held. The General Secretary

This Association also provides an employment bureau whose services are free to students in all departments of the institution, as well as a committee to help students to find comfortable rooms and boarding places. The Association also maintains an educational department in which students may make up their entrance conditions at a nominal charge for devotes all of her time to the Association and will be pleased to correspond with any young woman who wishes information regarding the University.

All young women are invited to visit the Young Women's Christian Association room before registering. Women from the upper classes will be there during the opening days to give advice and assistance.

Any inquiry about board, room, employment, or general information will gladly be answered by Miss Agnes Crounse, '07, 3840 Richfield Ave., Minneapolis.

*The University Catholic Association* was organized by the Catholic students in the spring of 1900. The purpose of the Association is the study of the Bible and of the doctrines and history of the Catholic Church. Membership is open to any one connected with the University. Regular meetings are held every Sunday afternoon in the rooms of either the Young Men's or the Young Women's Christian Association, through the courtesy of those organizations. The Association is planning to erect a building on or near the campus at an early date.

Aside from the religious objects, the Association tends to promote good fellowship among its members. Early in each University year a reception is tendered to new students and during the year two or more socials are held.

Further information may be obtained by addressing the Secretary of the Association at the University.

## DEBATE AND ORATORY.

*Literary Societies.*—The literary societies are mainly debating clubs. Every student is welcome to attend the literary sessions, but the business sessions are usually held behind closed doors. Students desiring to join should make early application to some member of the society he prefers, as the membership is limited.

*The Minnesota Literary Union*—Is a federation of the members of the following societies: Shakopean, Forum, Castalian, Minerva and Arena. Four meetings are held each year.

Membership Limit: *Shakopean,* 35, men; *Forum,* 30, men; *Minerva,* 30, women; *Law Literary,* unlimited, law students; *Castalian,* 35. men; *Theta Epsilon,* 30, women; *Thalian,* 25, women.

*The Debating Board* has charge of home and inter-collegiate oratorical contests.

*The Northern Oratorical League* is composed of the oratorical associations of the University of Michigan, Northwestern University, the University of Wisconsin, Oberlin College, the State University of Iowa, the University of Chicago, and the University of Minnesota. Its purpose is to foster an interest in public speaking and to elevate the standard of oratory by holding annual contests. The contests are open only to undergraduates.

*The Iowa-Minnesota League* is composed of the two universities and holds an annual contest in debate.

*The Central Debating League* is composed of the debating associations of the University of Michigan, the University of Minnesota, Northwestern University, and the University of Chicago. Its purpose is to discuss in public leading questions of the day and in this way to develop ready and forceful speakers.

The four universities are arranged in two groups for the semi-final debates, which are held the second Tuesday in January. On the first Friday in April in each year, the winners from the groups meet in a final debate in the city of Chicago.

The University competes annually for the *Hamilton Club* prize. Michigan, Minnesota, Wisconsin, Iowa, Ohio, Indiana, Northwestern and Chicago Universities and Knox College constitute the league. Each of the colleges named submits one oration upon Alexander Hamilton or some character or event connected with his time. From the orations submitted four are chosen to be delivered before the Hamilton Club.

## MUSICAL, SOCIAL AND OTHER ORGANIZATIONS.

*The Women's League* is an organization of the women of the University for mutual helpfulness and sociability.

*The Dramatic Club* is organized for the study and practice of dramatic art. One or more plays are put on the stage each year.

*The Glee and Mandolin Clubs* give a public concert each year at the University and make a tour of the state during the holidays.

*The University Band* is organized as a part of the military system of the University and is composed of about sixty musicians. It is under the efficient leadership of an Instructor in Music, and furnishes music for military and many other University affairs.

## LITERARY AND SCIENTIFIC ORGANIZATIONS.

*Phi Beta Kappa.*—A chapter of the honorary society of *Phi Beta Kappa* was established at the University in 1892. A small proportion of the graduates of the College of Science, Literature and the Arts are elected to membership each year. Election is based upon high scholarship and character.

*The Philological Society.*—The object of the Philological Society is to promote philological investigation and study.

*Greek Club* is a society composed of professors, students and alumni of the Department of Greek for the study of Greek life, language and customs.

*Societas Latina* is a society in the Department of Latin, having for its special aim the securing of greater proficiency in reading and writing Latin.

*The Scandinavian Literary Club* is an organization whose purpose is to promote interest in the study of Scandinavian literatures.

*The Philosophical Club* meets bi-weekly in the evening during the winter months to read and discuss contemporary philosophy. The membership consists of the professors, instructors, and qualified students of the department.

*The Economic Club* meets twice a month for debate in economic and political subjects.

*The Graduate Club* is a club organized for the purpose of fostering a greater interest in graduate work, for mutual help, and for the discussion of topics under investigation.

*The University Liberal Association* is an organization of students and faculty members formed for the discussion of topics of broad and current interest. It meets twice a month, usually on Saturday evening.

*Sigma Xi.*—A chapter of the honorary scientific society of *Sigma Xi* was established at the University in 1896. A small proportion of the graduates of the scientific, and technical department are elected to membership each year. Election is based upon high scholarship and character.

*American Chemical Society.*—A local section of the American Chemical Society has been organized in Minnesota with headquarters at the University.

*The Camera Club* is an organization of instructors and students interested in photography and photographic chemistry.

*The Geological Club* is an organization of instructors and students interested in geology, for the discussion of geological problems.

*The Botanical Students' Journal Club* is an organization of juniors, seniors and graduate students, of the Department of Botany, for the review of current botanical literature.

*The Zoölogical Journal Club* for instructors and advanced students who meet for the discussion of current zoölogical literature.

*The Zoölogical Reading Club* meets evenings at the homes of the professors and is for instructors and graduate students. Its purpose is the reading and discussion of philosophical works on Zoölogy.

*The Physical Colloquium* is composed of instructors and graduate students and meets for the discussion of recent investigations in physical science.

*The Society of Engineers* meets once in two weeks to listen to addresses by prominent engineers and for the discussion of various engineering topics. The Year Book of this society is published annually. It is devoted to the publication of articles upon engineering subjects by professors and students in the College of Engineering and the Mechanic Arts.

*The Mining Society* is an organization of mining engineering students who meet for the purpose of hearing lectures and discussing mining engineering problems.

*The Mathematical Society* is composed of professors, assistant professors and instructors whose work is in Pure or Applied Mathematics, and meets the third Wednesday of each month for the discussion of mathematical subjects.

## PUBLICATIONS.

*The University Bulletins* are published by authority of the board of Regents twelve times a year—every four weeks during the University year. Bulletins will be sent gratuitously, postage paid, to all persons who apply for them.

*The Minnesota Alumni Weekly* is published every Monday during the University year. The Weekly is published entirely in the interest of the alumni and is devoted to alumni news and such University news as may be of special interest to the alumni.

*The Minnesota Daily* is published five times each week during the University year by an organization of University students.

*The Yearbook of the Society of Engineers* is published annually by the engineering students.

*The Junior Annual,* called the "Gopher," is a book published annually by the junior class of the University.

*The Minnesota Magazine* is a monthly magazine devoted to the cultivation of literary taste and effort among the students of the University. It is managed by a board of editors chosen from the senior class.

## ATHLETICS.

*The Athletic Association* is an organization having for its object the general physical well-being of the students and the encouragement of a proper spirit in favor of hearty, manly sports.

*Control of Athletics.* The athletic sports of the University are under the supervision of a Board of Control made up of eleven members; two are members of the faculty, two are alumni and seven are students. This board has general supervision of all matters connected with athletic contests and arranges the schedule of games. It is the purpose of the board to foster a spirit in favor of fairness and honesty in all athletic contests.

*Northrop Field* is an enclosed athletic field containing about six acres, immediately adjoining the armory. It is surrounded by a high brick wall, the gift of A. F. Pillsbury, and is one of the finest athletic fields in the country.

# Scholarships and Prizes

## UNIVERSITY SCHOLARSHIPS

It is the policy of the University to establish scholarships in the different departments, where extra help is needed for instruction, under regulations somewhat as follows:

1. The appointments are made by the Executive Committee of the Board of Regents, upon the recommendation of the department in which the appointment is desired, after approval by the General Faculty.
2. Recipients of scholarships may be either graduate or undergraduate students.
3. The scholarships are not intended as gifts or benefactions from the state to the recipients, but as provisions under which services may be rendered the University.
4. It is understood that these services are of a nature which shall assist the holder of a scholarship to attain the mastery of some line of work in the department to which he is appointed.

## ENDOWED SCHOLARSHIPS

### THE MOSES MARSTON SCHOLARSHIP IN ENGLISH.

Friends and pupils of the late Professor Marston, Ph. D., have given and pledged one thousand dollars as a memorial fund. The annual income of the fund is to be used to help some student in the long English course. The award of the income is made on the basis of pecuniary need and of deserving scholarship.

### THE ALBERT HOWARD SCHOLARSHIP FUND.

Under the last will and testament of Mr. James T. Howard, of the town of St. Johnsbury, Vermont, $4,166.81 was left to the University to establish a scholarship to be known as the "Albert Howard Scholarship." This scholarship is assigned by the Executive Committee upon the recommendation of the General Faculty.

## STUDENT LOAN FUNDS

### THE ELLIOT SCHOLARSHIP LOAN FUND.

To fulfill the wish of the late Dr. A. F. Elliot to aid young men who find their efforts to obtain a practical education embarrassed through lack of means, the income of $5,000, amounting to $250 per year, is placed in the hands of the Board of Regents to be used as a scholarship loan fund for assisting young men in the school of mines.

The conditions of granting the scholarship loans are: The financial needs of the applicant, his scholarship, moral character, enthusiasm shown in his work and promise of usefulness in his profession. When money is available it may be loaned to pay expenses of worthy students during sickness. The loans are to repaid, without interest, at the earliest convenience of the recipients.

### THE GILFILLAN TRUST FUND.

The Honorable John B. Gilfillan has given to the University the sum of fifty thousand dollars, yielding an annual income of two thousand dollars, to be used by the Board of Regents to assist worthy students, needing such aid, to secure an education. The Regents are empowered to give this aid in the way of loans or gifts, according to the circumstances of the case. As a rule the fund is used as a loan fund, and a small rate of interest is charged. The details of the regulations which have been adopted by the Regents for the administration of the fund may be learned by addressing the President of the University.

## PRIZES.

### THE PILLSBURY PRIZE.

Three prizes of $100, $50 and $25, offered by the heirs of the Hon. John S. Pillsbury, are awarded for the best work in the Department of Rhetoric, as evidenced finally by an oration in public.

### THE '89 MEMORIAL PRIZE IN HISTORY.

The class of 1889, at graduation, established a prize of $25 each year, to be known as the '89 Memorial Prize, and to be given for the best thesis in history. The award is made by a Professor of History in some other institution.

### THE DUNWOODY PRIZE.

Mr. William H. Dunwoody, president of the St. Anthony and Dakota Elevator Company, has provided a cash prize of $75 for the members of the team winning the inter-sophomore debate, and another prize of $25 for the student in the sophomore class writing and delivering the best oration.

## THE PEAVEY PRIZE.

Mrs. Heffelfinger continues the prize of $100, established by her father, the late Frank H. Peavey. This prize consists of $75 for the members of the team winning the freshman-sophomore debate, and another prize of $25 to the student in the freshman or sophomore class writing and delivering the best oration.

## THE WYMAN PRIZE.

A prize of fifty dollars is offered by the Honorable James T. Wyman, of Minneapolis, through the department of political science, for the best essay of three to five thousand words by an undergraduate student, on the subject of "The Influence of Immigration upon the Development of the Northwest."

## THE WILLIAM JENNINGS BRYAN PRIZE.

The Hon. William Jennings Bryan has given the University the sum of $200.00 for the encouragement of studies in political science. The annual income will be given as a prize to the writer of the best essay upon a topic to be announced each year. The competition is open to all students of the College of Science, Literature and the Arts.

## THE BRIGGS PRIZE IN FOUNDRY PRACTICE.

For the encouragement of studies in foundry practice, Mr. O. P. Briggs, Commissioner of the National Foundrymen's Association, Detroit, Mich., offers $75 annually, in two prizes, which are to be accompanied by gold medals. The competition is open to sophomores in the College of Engineering, and the prize will be awarded for the best essay relative to the above subject. No prize will be awarded if less than five essays are submitted in competition. Essays should contain about 3,000 words, and must be submitted to the Professor of Rhetoric on or before May 1st.

## THE LOWDEN PRIZE.

Mr. Frank O. Lowden, of Chicago, offers as a prize to be competed for by the Northern Oratorical League, an endowment of $3,000, which will yield an annual income of about $175. A prize of $100 will be given to the winner of the first place, $50 to the orator who gets second place, and the remainder will be set aside each year for an interest fund to accumulate, and, in time, produce another endowment.

## MINNEAPOLIS LIFE UNDERWRITERS ASSOCIATION'S PRIZE.

A prize of fifty dollars is offered by the Minneapolis Life Underwriters Association for the best essay on life insurance written by a senior of the class of 1906. Essays should contain at least 3,000 words and be presented to the Professor of Political Economy on or before May 21, 1906.

## THE ROLLIN E. CUTTS PRIZE IN SURGERY.

Dr. Mary E. Smith Cutts, '91 Medical, has given the University, as a memorial of her husband, Dr. Rollin E. Cutts, '91 Medical, the sum of $500.00, the income from which is to be awarded in the form of a gold medal to that member of the senior class of the College of Medicine and Surgery who presents the best thesis showing original work upon a surgical subject.

# General Information

## THE ONE-MILE LIQUOR LAW.

A state law provides that "it shall be unlawful for any person to sell or dispose of any spirituous, vinous, or malt liquors within the distance of one mile of the Main Building of the University of Minnesota, as now located in the city of Minneapolis; provided, that the provisions of this section shall not apply to that part of the city of Minneapolis lying on the west side of the Mississippi River."

## MILITARY DRILL.

The act of Congress of 1862, providing for the establishment of "Land Grant Colleges," requires that instruction be given in Military Science and Tactics at all institutions that are its beneficiaries. The Armory is located on the University campus and has all the facilities usually provided in a modern Armory. The United States Government supplies the University with the necessary arms, equipment and ammunition for instruction in infantry and artillery drill, and details a commissioned officer of the regular army to take charge of the department.

## EXPENSES OF STUDENTS.

Several years ago a number of young men and women, at the request of University officials kept careful account of their expenses for the University year. The result was that the expenses of the young men ranged from $217.00 to $397.00. The same students earning sums varying from $237.00 to $272.00. The young women reported expenses varying from $150.00 to $355.00. These figures do not include fees, and, as the cost of living has increased decidedly, probably 25 per cent should be added to these figures to make them safe.

The students upon whose statements these figures are based were representative students; they were not extravagant nor did they deny themselves unduly to get along. While students can live within the figures given above, they would not, owing to the increased cost of living, be able to live as comfortablly nor to have as many privileges as these students had.

Board can be had at prices ranging from $2.10 to as high as the student can afford to pay. In private families board ranges from $3.00 to $5.00.

Furnished rooms vary in price from $8 to $20 per month. Two students rooming together would of course reduce this expense. It is sometimes possible for a student, rooming alone to secure a good room at an expense but little higher than when two room together; but such chances are the exception and not the rule. New students will find that they will be more likely to secure comfortable rooms and suitable board if they will consult the general secretary of either the young men's or young women's Christian association immediately upon arrival at the University, or if they will correspond with these officers before coming to the University.

The student who learns some trade before coming to the University has a great advantage over the student who has to earn his money by ordinary manual labor. Students have earned their whole expenses while attending the University, and have made good records at the same time. Other students have done so much work that they have not been able to keep up their studies, and have thus missed the one thing for which they were attending the University.

If it is possible for the student to have a part of his expenses paid, he should not attempt to earn his way entirely by his own exertions. It is a comparatively easy thing for a young man to earn half his living while attending the University and yet do good work in his classes. Students who want work seldom fail to find it. In coming to the University, the student should bring enough money with him so that he can live comfortably for a few weeks until he can find something to do.

A pamphlet has been published containing five papers (one by a young woman), relating actual experience of students who have made their way through the University.

Students who contemplate making their own way through college will find here stated the stern and unpleasant side, as well as the brighter side of such a life. A copy will be sent free to any address upon application.

The College of Homeopathic Medicine and Surgery sets forth as its peculiar advantages:

First—That it is an integral part of a great university, fully equipped for carrying out of its work by the munificence of the state.

Second—That its students partake of all the privileges accruing from living in a university atmosphere which draws to itself the leaders of thought in all branches of science and literature.

Third—That the libraries not only of the Medical Department but of the entire university and the cities of Minneapolis and St. Paul are open to those investigating any line of thought.

Fourth—That the arrangement of work and division of classes is such as to give each student the greatest amount of individual practical work under trained instructors.

Fifth—The state of Minnesota shows its loyalty to the university by a constant demand for the graduates and the dean has each year requests for physicians to locate in various parts of the state.

# The Department of Medicine

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The Department of Medicine includes the following named colleges:
*The College of Medicine and Surgery.*
*The College of Homeopathic Medicine and Surgery.*
*The College of Dentistry.*
*The College of Pharmacy.*

Each college is distinct in the government of its internal affairs, has its own faculty and an independent curriculum, save in the studies of anatomy, physiology, chemistry, histology and embryology. These studies, so far as they are required in the various courses, are pursued by all students of the department in common.

## BUILDINGS AND EQUIPMENT.

The department is resident in six buildings, five of which are situated upon the University Campus, viz: Medical hall, the Medical Science building, the Laboratory of Chemistry, the Laboratory of Anatomy and the Institute of Public Health and Pathology. In addition, two more buildings, a University Hospital and a building for Operative Surgery, are provided for and will be erected.

Medical hall contains the offices of the dean and secretary of the college of medicine and surgery, and of the deans of the college of homeo pathic medicine and surgery and of the college of dentistry; a large amphitheatre and lecture rooms for the several colleges, the library and reading room of the department, the laboratory of materia medica, the operating rooms and laboratories of dentistry and the dental infirmary.

The Medical Science building is a large three-story and basement building, 75 x 150 ft., especially designed for laboratory uses. The south wing of the building is occupied by the college of pharmacy and the department of physiology. It contains the office and private laboratory of the dean of the college of pharmacy, the pharmaceutical and botanical larboratories, the laboratory of organic chemistry, with preparation and stock rooms. A large lecture amphitheatre, especially arranged for demonstrative work in physiology, the laboratories of experimental physiology and of physiologic chemistry, the offices, library and recitation rooms of this department are also situated in this wing. Upon the basement floor are laboratory stock rooms, work shop, and the animal rooms devoted to physiologic purposes.

The north wing and center are occupied by the department of Histology and Embryology. Each of these branches has its large, well-lighted laboratories, preparation rooms and private study rooms for research. In addition there are lecture and recitation rooms, smaller laboratories for micro-technique and neurology; animal rooms and operating rooms for experimental work; rooms for photography and photomicrography, for reconstruction work and the making of models and charts; chemical laboratory, departmental library, a vault for the storage of the very valuable collection of series of embryos and sets of histological slides; store rooms and the offices of the professors and assistants.

The Laboratory of Medical Chemistry is a one-story brick building, devoted entirely to the use of this department. It is equipped with amphitheatre, laboratories, preparation rooms, store rooms, and private offices of the professor and assistants.

The Laboratory of Anatomy is a new two-story and basement building, 35 x 60 feet. In the basement are the morgue, injecting room, cold storage vaults, and engine and apparatus for the carbon dioxide freezing plant. On the first floor there is an amphitheatre seating one hundred and seventy-five students, the privates offices of the professors and instructors, a private dissecting room and a smalll laboratory for research work. The entire second floor is devoted to laboratories for practical work in anatomy.

The Institute of Public Health and Pathology, now almost completed, will be ready for occupancy for the year 1906-07.

The building, which is 213 feet over all and 100 feet deep in the central portion, consists of a central main portion 60 by 100 feet, with north and south wings each 56 by 75 feet.

In the south wing are housed the State Board of Health laboratories, which are connected by an underground passage with the adjacent Laboratory of Animal Research of the Minnesota State Board of Health. This wing also contains a suite of rooms for a Pasteur Institute in which the special treatment of and research in rabies will be carried on. Diagnostic laboratories are provided for the bacteriological, chemical and pathological work of the State Board of Health, workshops for the repair and making of special apparatus, unpacking, storage, shipping, washing and media rooms are also available. Research laboratories and the offices and special laboratories of the professional members of the staff are here provided together with vaults for records and offices for the clerical staff.

The central portion and north wing provide for teaching and research work in the University Departments of Pathology, Bacteriology and Public Health. The central portion of the building is 100 by 60 feet, being three stories in front and four stories in the rear, where three of the stories are devoted to museum and library purposes. Here special books and periodicals are provided and interesting pathological and bacteriological specimens and materials, apparatus, methods of construction and other illustrative features of public health are on exhibition. On the first floor is a preparation room for the museum and lecture room, beneath the museum and adjacent to the lecture and autopsy room. Six special laboratories and offices are provided for the Professor of Surgical Pathology, Assistant Professor of Pathology, Demonstrator of Pathology and Bacteriology and the Assistant Director of the State Board of Health Laboratory. The remainder of the central portion is occupied by the lecture and autopsy amphitheatre, special research laboratories, photographic laboratories and a cold storage plant.

In the north wing the main teaching laboratory occupies the full floor space of 75 by 56 feet. It is lighted on three sides and by a skylight and is divided by low partitions into twelve loges, each intended for the use of a group of students. Each loge is fully equipped with all apparatus and supplies which the students may need in the practical work of pathology, bacteriology or public health, so as to render each group independent. A coat room and a room for the distribution of supplies open off the main laboratory. Beneath this is a similar students' research laboratory containing six loges which are to be used for the teaching of such special courses as Pathology of Tumors, Neuro-Pathology, practical Public Health laboratory work, etc. Opening off this is a special laboratory for the teacher in charge, for the issuing of supplies and also a coat room. Other special laboratories, including rooms for the preparation and storage of media and the storage of stock cultures of bacteria, and living quarters for the janitor are also in this wing.

A University Hospital upon the Campus has been provided for through a bequest by the widow of the late Dr. A. F. Elliott; this money, amounting to over $125,000.00 will be used in the construction of a large, thoroughly equipped hospital designed with especial reference to teaching purposes.

The last Legislature provided for a building adjacent to the Medical quadrangle which when completed will give fine accommodation for operative surgery, pharmacology, an animal hospital and for the storage and breeding of animals.

The University Clinical Building is situated in a part of the city most favorable to the development of an out-door service and, at the same time, accessible to the students. It is of two stories and covers 40x150 feet. It affords ample floor space for amphitheatres, waiting rooms, dispensary and class rooms for each of the clinical branches. Wards and laboratories, in which section work in medical and surgical diagnosis can be conducted, have been equipped.

The Department of Medicine is in intimate relationship, through its several faculties, with the numerous hospitals, infirmaries and dispensaries of the cities of Minneapolis and St. Paul. Through these agencies it utilizes, for the benefit of its students, the clinical material of these two large cities with a population of 500,000 people. The location of the University between two interurban car lines enhances the value and convenience of these clinical opportunities.

A medical library, containing 4,000 volumes and supplied with current periodicals, is open to all the students of the department. The collection has been chosen with special regard to the need for reference work and collateral reading. The general library of the University and the public and medical libraries of Minneapolis and St. Paul are also open to the students of this department.

# Calendar, College of Homeopathic Medicine and Surgery

## FIRST SEMESTER.

| | | | | |
|---|---|---|---|---|
| SEPTEMBER | 13 | Th. | Entrance and condition examinations. Registration. | |
| | 14 | F. | Entrance and condition examinations. Registration. | |
| | 15 | S. | Entrance and condition examinations. Registration. | |
| | 17 | M. | Registration and classification of students. Opening lecture, 8:00 P. M. | |
| | 18 | T. | Classes called for regular work. | |
| | 22 | S. | | 1 wk. |
| | 29 | S. | | 2 wk. |
| OCTOBER | 6 | S. | | 3 wk. |
| | 13 | S. | | 4 wk. |
| | 20 | S. | | 5 wk. |
| | 27 | S. | | 6 wk. |
| NOVEMBER | 3 | S. | | 7 wk. |
| | 10 | S. | | 8 wk. |
| | 17 | S. | First half semester ends. | 9 wk. |
| | 19 | M. | Second half semester begins. | |
| | 24 | S. | | 10 wk. |
| | 29 | Th. | Thanksgiving Day. Recess three days. | |
| DECEMBER | 1 | S. | | 11 wk. |
| | 8 | S. | | 12 wk. |
| | 15 | S. | | 13 wk. |
| | 22 | S. | Holiday recess begins. No classes. | 14 wk. |
| JANUARY | 8 | T. | Work resumed in all classes. | |
| | 12 | S. | | 15 wk. |
| | 19 | S. | | 16 wk. |
| | 26 | S. | | 17 wk. |
| FEBRUARY | 2 | S. | End of first semester. | 18 wk. |

## SECOND SEMESTER.

| | | | | |
|---|---|---|---|---|
| FEBRUARY | 5 | T. | Second semester begins. Work resumed in all classes. | |
| | 9 | S. | | 1 wk. |
| | 12 | T. | Lincoln's Birthday—Holiday. | |
| | 16 | S. | | 2 wk. |
| | 22 | F. | Washington's Birthday—Holiday. | |
| | 23 | S. | | 3 wk. |
| MARCH | 2 | S. | | 4 wk. |
| | 9 | S. | | 5 wk. |
| | 16 | S. | | 6 wk. |
| | 23 | S. | | 7 wk. |
| | 30 | S. | | 8 wk. |
| APRIL | 6 | S. | First half semester ends. | 9 wk. |
| | 13 | S. | | 10 wk. |
| | 20 | S. | | 11 wk. |
| | 27 | S. | | 12 wk. |
| MAY | 4 | S. | | 13 wk. |
| | 11 | S. | | 14 wk. |
| | 18 | S. | | 15 wk. |
| | 25 | S. | | 16 wk. |
| JUNE | 1 | S. | | 17 wk. |
| | 7 | F. | Annual Faculty meeting. | |
| | 8 | S. | End of second semester. | 18 wk. |

## COMMENCEMENT WEEK. 1907.

| | | |
|---|---|---|
| Sunday, | June 9 | Baccalaureate Service. |
| Monday, | June 10 | Senior Class Exercises. |
| Tuesday, | June 11 | Senior Promenade. |
| Wednesday, | June 12 | Alumni Day. |
| Thursday, | June 13 | Commencement Day—The Eighteenth Annual Commencement. |
| Friday, | June 14 | Summer Vacation begins. |

## SCHEDULE OF EXAMINATIONS FOR ADVANCED STANDING AND TO REMOVE CONDITIONS.

September 13-15, 1906.

| | |
|---|---|
| Thursday, Sept. 13, 9:00 a. m. | 2:00 p. m. |
| I. Year Chemistry<br>II. Year Chemistry | I. Year Histology and Embryology, practical and didactic<br>II. Year Histology and Embryology, practical and didactic. |
| Friday, Sept. 14, 9:00 a. m. | 2:00 p. m. |
| I. Year Physiology<br>II. Year Physiology | I. Year<br>II. Year General Pathology and Bacteriology, practical and didactic |
| Saturday, Sept. 15, 9:00 a. m. | 2:00 p. m. |
| I. Year Anatomy<br>II. Year Anatomy | I. Year<br>II. Year Materia Medica |

# Faculty

Cyrus Northrop, LL. D., *President of the University.*

Eugene L. Mann, A. B., M. D., *Dean of the College.*
694 Endicott Arcade, St. Paul.

## MATERIA MEDICA AND THERAPEUTICS.

W. E. Leonard, A. B., M. D,, *Senior Professor.*
Andrus Building, Minneapolis.

Adolph W. Johnson, *Lecturer on Pharmacy.*

## PRACTICE OF MEDICINE.

Asa S. Wilcox, A. B., M. D., *Senior Professor.*
Masonic Temple, Minneapolis.

O. H. Hall, M. D., *Associate Professor, Renal Diseases.*
Pittsburg Building, St. Paul.

D. W. Horning, A. B., M. D., *Associate Professor, Diseases of Heart and Lungs.*
Pillsbury Building, Minneapolis.

Anna H. Hurd, Phm. D., M. D., *Lecturer, Diseases of Blood and Ductless Glands.*
Pillsbury Building, Minneapolis.

## CLINICAL MEDICINE AND PHYSICAL DIAGNOSIS.

H. M. Lufkin, M. D., *Senior Professor.*
Germania Life Ins. Bldg., St. Paul.

D. W. Horning, A. B., M. D., *Associate Professor*
Pillsbury Building, Minneapolis.

A. G. Phelps, M. D., Norman M. Smith, H. O. Skinner, M. D, *Assistants.*

## SURGERY.

R. D. Matchan, M. D., *Senior Professor.*
Masonic Temple, Minneapolis.

W. S. Briggs, M. D., *Senior Professor, (Clinical.)*
Pittsburg Building, St. Paul.

A. E. Comstock, M. Sc., M. D., *Professor, Regional Surgery.*
N. Y. Life Building, St. Paul.

A. E. Booth, M. D., *Professor of Orthopaedia.*
Andrus Building, Minneapolis.

W. B. Roberts, A. B., M. D., *Professor of General Surgery.*
Pillsbury Building, Minneapolis.

A. E. Ahrens, M. D., *Assistant.*

### OBSTETRICS.

B. H. Ogden, A. B., M. D., *Senior Professor.*
Ernst Building, St. Paul.

Hugh J. Tunstead, M. D., *Associate Professor.*
829 16th Ave. N., Minneapolis.

### GYNAECOLOGY.

R. R. Rome, M. D., *Senior Professor.*
Andrus Building, Minneapolis.

E. E. Austin, M. D., *Professor.*
Andrus Building, Minneapolis.

F. G. Cobb, M. D., *Assistant.*

### MENTAL AND NERVOUS DISEASES AND MEDICAL JURISPRUDENCE.

### OPHTHALMOLOGY.

H. H. Leavitt, M. D., *Professor.*
Pillsbury Building, Minneapolis.

### OTOLOGY-RHINOLOGY AND LARYNGOLOGY.

Eugene L. Mann, A. B., M. D., *Professor.*
Endicott Arcade, St. Paul.

L. D. Shipman, M. D., *Clinical Professor.*
Medical Building, Minneapolis.

### SKIN AND GENITO-URINARY DISEASES.

C. H. Neill, M. D., *Professor.*
Medical Building, Minneapolis.

### PAEDOLOGY.

Geo. B. Hamlin, M. D., *Professor.*
506 Masonic Temple, Minneapolis.

### ELECTRO-THERAPEUTICS.

Ethel S. Hurd, M. D., *Lecturer.*
Pillsbury Building, Minneapolis.

### ANATOMY.

C. A. Erdmann, M. D., *Professor.*
Pillsbury Building, Minneapolis.

### PHYSIOLOGY.

R. O. Beard, M. D., *Professor.*
Pillsbury Building, Minneapolis.

### HISTOLOGY AND EMBRYOLOGY.

T. G. Lee, B. S., M. D., *Professor.*
The University.

### PATHOLOGY AND BACTERIOLOGY.

F. F. Wesbrook, M. A., M. D., C. M., *Professor.*
The University.

### CHEMISTRY.

H. C. Carel, B. S., *Professor.*
The University.

# Announcement

The College of Homeopathic Medicine and Surgery offers special advantages to students seeking a medical education. Through the generosity of the state, an equipment of buildings, laboratories and apparatus is provided, equal to that of the best medical schools in this country or Europe. With this equipment it is possible to lay that broad foundation for a medical education without which no physician can hope for the highest success. An institution deficient in the requirements for teaching the fundamental branches of medical practice cannot long maintain the confidence of the medical profession. Homeopathy, as an expanding science, draws toward itself as a part of its rightful possession, every addition to medical knowledge that can be of any service in the cure of the sick. The homeopathic physician should feel that he is "heir of all ages" in medical learning, having that catholicity of training which places at his command every known resource, including as his especial advantage, the added power of coping with disease, that comes from his knowledge of the science of homeopathy.

The breadth of view of this result is provided in the college of homeopathic medicine and surgery in a real university course, botany, chemistry (organic and inorganic), histology, embryology, bacteriology, pathology, anatomy, physiology, hygiene and sanitary science, with all the accessories of laboratory work; second, in building upon this foundation a comprehensive knowledge of therapeutics, practice and surgery. The student has daily training in both the practical and theoretical aspects of medicine. In the first two years the practical training is provided in constant individual work in the laboratories of dissecting rooms; in the last two is a broad field of clinical study and observation, in both medical and surgical cases, which the nearly one-half million population of the Twin Cities abundantly supplies. The theoretical work is carried on in daily didactic lectures and text-book study throughout the entire course.

Special emphasis is placed upon the clinical instruction in both dispensary and hospital practice. Senior students have the opportunity to attend out-door patients, assist in special and general operations, and to attend obstetrical cases during the last course of lectures.

The college alumni now in practice are evidence of the character of its work. The loyal support of the profession throughout the northwest has encouraged and upheld the faculty in giving form to this new phase of the work.

The college proposes to stand for a broad, catholic, scientific and therefore, homeopathic education in medicine and surgery.

# Rules and Regulations of the College

## COLLEGE YEAR.

The nineteenth annual course of study in this college will begin on September 13, 1906, and will continue nine months, closing upon Saturday, June 8, 1907.

The college year is divided into semesters; the first semester ending February 3, 1907. The last week is devoted mainly to mid-year examinations, which will be conducted in many of the departments. The second semester will begin February 5, 1907, and will close June 8, 1907. Many of the courses of study occupy the half semesters which terminate on November 17th, and April 6th. Commencement exercises will occur in common with the other departments of the University, during the week ending June 14, 1907.

## ENROLLMENT.

Students are urged to matriculate on or before September 13, 1906. Entrance and condition examinations will be held September 13 to 15. Opening lecture, September 17. Classes called for regular work, September 18.

Students will be assigned seats in order of and at the time of their matriculation. Such matriculation and assignment of seats will be had in the office of the registrar of the University.

Students, having matriculated, will present tuition receipts and entrance credentials to the dean and secretary of the college of homeopathic medicine and surgery, who will pass upon their preliminary qualifications. If such credentials prove unsatisfactory they will be required to take the necessary entrance examinations before a committee of the college of science, literature and the arts.

Students wishing to take advanced standing will apply to the secretary. Upon admission and classification, students will report to the professors in charge of their respective studies.

## REQUIREMENTS FOR ADMISSION.

Candidates for admission to the College of Homeopathic Medicine and surgery for the College year 1906-'07 must present evidence of the following:

I. That the candidate has satisfactorily completed at least one year's college work in Arts or Science that is recognized by this University as equivalent to its own requirements.

II. That in addition to the above each candidate must have satisfied all of the requirements for entrance to the College of Science, Literature and the Arts of this University. See under General Regulations pp. 88-96

Candidates for admission to College of Homeopathic Medicine and Surgery may be allowed, under certain circumstances, to enter with a condition in their first year's college work, but such condition must be satisfactorily removed before the beginning of the second year.

Beginning with the College year 1907-'08, all candidates for entrance to the College of Homeopathic Medicine and Surgery *must have completed two years' work in the College of Scihnce, Literature and the Aris, or its equivelent.*

## EXAMINATIONS—FINAL STANDINGS.

No student with an entrance condition will be allowed to register for any second-year subject, nor will any student with any first-year condition or failure be allowed to register for a third-year subject; nor will any student having a second-year condition or failure be allowed to register for any fourth-year subject.

No student will be allowed to omit any freshman work in order to make up entrance conditions, except by special permission of Department affected.

Habitual absence without a satisfactory excuse, continued indifference to study, or persistently poor scholarship may subject the student to temporary or permanent suspension.

Students will not be permitted to substitute private work in any branch for the regular college course work, excepting in the case of actual laboratory exercises done under the direct supervision of an instructor appointed by the chair and approved by the faculty. Examinations in such private laboratory work will be conducted by the chair. This rule does not apply to conditioned students.

Final examination in every required subject is held at the close of the work at the end of the semester or half semester, according to the extent of the course given. Opportunity is offered to remove conditions at the opening of the school year in September. The examinations at the end of semester or half semester are only for those who are taking the courses, while the September examinations are only for those who are attempting to remove conditions or are applicants for advanced standing.

The final standing of any student in a given subject shall be determined as the result of his (a) practical work (laboratory or clinical) (b) recitations and (c) oral or (d) written examinations.

All of these factors shall be taken into consideration in making up the final grading in any subject.

Students' standings shall be determined at the end of the year by a conference of the heads of the departments in which the work is pursued during that year.

All standings shall be reported officially to and from the Dean's office at the end of the year.

Students shall be reported as Passed, Incomplete, Conditioned or Failed.

Conditions must be removed at the beginning of the school year in September. No student who has any conditions unremoved at the close of this examination is allowed to continue with his class without the express permission of the Dean on the recommendation of the Departments concerned.

A condition not made up before the subject is offered again becomes a failure subject to the rule governing failures.

Failures must be taken over again in class.

A student taking work over again (by reason of having "failed") must pay the fees connected with that course.

A student who is conditioned in the majority of the subjects given in any year will become a failed student and must repeat the work of that year.

Students who carry conditions into a succeeding year may find a resultant conflict of study hours. In that event they will give preference to the unfinished studies of the lower conflicting course.

## ADVANCED STANDING.

All persons applying for advanced standing must present satisfactory evidence of time spent in medical studies, must pass examinations in the branches already taken by the class they seek to enter and satisfy all other admission requirements, but any student who has satisfactorily completed the requirements of any department of this College in any other school of recognized standing may be excused from repeating such examinations if the instruction which he has received is considered satisfactory by the head of the corresponding department in this College.

No condition of advanced standing will entitle the student to take the two years of any graded study coincidently.

Seniors in the college of science, literature and the arts, or in other recognized colleges, who contemplate entering the department of medicine, are permitted to elect courses in anatomy, histology and embryology, physiology and chemistry in this department in lieu of similar science courses in the college of science, literature and the arts or in the other colleges.

No student may be advanced with his class or given advanced standing unless he has passed the majority of the required examinations in the studies of the previous year; nor shall any student be admitted to the second semester's work of the fourth year who has any unremoved conditions of any of the preceding years, but an opportunity to remove such conditions shall be given to fourth-year students at the close of the first semester.

## TERMS OF TUITION.

The annual fee in the College of Homeopathic Medicine and Surgery is $100. This includes all charges for matriculation, lecture and laboratory courses, dissections and graduation, excepting a $3.00 Hospital fee to Juniors and Seniors and a rental fee for microscopes;* payable by all students who do not own their own instrument.

One-half of the annual fee will be payable when the student matriculates. The accountant's receipt for this portion of the fee will entitle the holder to take the entrance examinations and to classify. The second half will be payable at the opening of the second semester, February 5, 1907. Failure to register within the dates assigned for registration will subject the delinquent to an increase in the registration fee, amounting to twenty-five cents for each day of such delinquency. If the applicant fails to pass the entrance examination, his fees will be returned by the accountant. Absence or failure to continue study will not entitle the student to return of fees, excepting in cases of special hardship, when application may be made to the executive committee of the Board of Regents.

A student who takes advanced standing will not receive any credit therefor upon his annual fees.

Students who are conditioned and fail to remove their conditions within one year shall be charged an extra examination fee.

Senior conditioned students who re-enter for work in any succeeding year will be charged a matriculation fee of ten dollars.

## BREAKAGE AND LOSS.

In each laboratory course the student will be assigned a certain amount of apparatus and material, for which he will give a receipt.

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*In each semester a fee of $1.00 to $5.00 will be charged for the rental of a microscope in the courses in which its use is required, provided the student is not supplied with a satisfactory instrument of his own. It is an advantage for the student to possess a microscope.

For apparatus and material attaching to his laboratory desk he will also be held responsible. At the end of each course, if such apparatus and material are restored in good condition, this receipt will be returned to him.

A deposit of five dollars will be made with the accountant each year, by every student, at the time of enrollment as a caution fee. This fee is intended to cover the cost of unnecessary damage in the college buildings and of breakage and loss of laboratory apparatus and materials. It will be returned to the student at the close of each year, minus the cost of articles assigned to him, which are not returned in good condition, or of damage to college property for which he is individually responsible. If responsibility for such damage cannot be individually fixed, a pro rata charge upon all students will be made.

## SPECIAL STUDENTS.

Special students will pay to the accountant a fee of twenty dollars per year for each study they elect to pursue. They will be charged additional fees, varying from five to twenty dollars, for each laboratory course they may enter.

Graduate students will pay an admission fee of ten dollars which will entitle them to attend any lectures they may desire in regular courses.

## CURRICULUM.

The course in the college of homeopathic medicine and surgery leads to the degree of doctor of medicine. It covers a four years course of collegiate study, each year representing nine months in actual residence.

The studies are graded, so far as practicable, throughout the four years and this grading is arranged with careful reference to the relation which the subjects naturally bear to each other.

The work of the first two years deals with the so-called scientific or laboratory branches; while that of the last two years includes the principles and practice of medicine and surgery, their associated specialities and the application of scientific or laboratory methods to clinical experience.

# Course of Study

## FIRST YEAR.

History and methodology of medicine.
Medical terminology.
Medical botany.
Inorganic chemistry—laboratory.
Anatomy—bones, muscles and joints.
Physiology.
Homeopathic pharmacy.

## SECOND YEAR.

Materia medica—experimental.
Organic chemistry—toxicology and urinalysis.
Histology and embryology—laboratory.
Anatomy, dissection.
Physiology—chemical and experimental.
Surgical emergencies and bandaging.
Bacteriology.
General pathology.

## THIRD YEAR.

Surgical anatomy.
Materia medica and therapeutics.
Practice of medicine, organan and institutes of medicine.
Clinical medicine and physical diagnosis.
Obstetrics.
Principles and practice of surgery.
Diseases of women.
Ophthalmology.
Nose, throat and ear.
Medical jurisprudence.
Clinics, medical and surgical.
Special pathology.

## FOURTH YEAR.

Surgical pathology.
Materia medica and therapeutics.
Practice of medicine.
Clinical medicine.
Mental and nervous diseases.
Dermatology and genito-urinary diseases.
Obstetrics.
Clinical obstetrics.
Principles and practice of surgery.
Ophthalmology.
Diseases of women—didactic and practical.
Orthopædic clinical surgery.
Pædology.
Electro therapeutics.
Life insurance examination.
Clinics, medical and surgical.

## SIX YEARS' COURSE.

In the year 1903-4, the University established a six years' course of study, arranged especially for students of medicine. This course is conducted in the colleges of science, literature and the arts, and of homeopathic medicine and surgery. It leads to the degree of bachelor of science at the end of the first four years and to the degree of doctor of medicine at the end of the six years' course. The work of the first two years is adapted to the needs of the student of medicine and all who expect to take the professional degree are urged to enter this course.

### FIRST YEAR.

1. **German.*
2. *Botany.*
3. *Chemistry.*
4. *Zoology.*
5. *Higher Algebra and Plane Trigonometry.*

### SECOND YEAR.

1. *Rhetoric.*
2. *German or French.*
3. *Chemistry.*
4. *Comparative Anatomy of Vertebrates.*
5. *Physics,* (special course.)

### THIRD YEAR.

1. *Human Anatomy,* as outlined in Courses I, II, III and IV, department of anatomy, college of homeopathic medicine and surgery.
2. *Histology and Embryology,* as outlined in Courses IV and V, department of histology and embryology, college of homeopathic medicine and surgery.
3. *Medical Chemistry,* including organic chemistry toxicology, urinalysis and sanitary chemistry, etc.
4. *Physiology,* as outlined in Courses I and II, department of physiology, college of homeopathic medicine and surgery.
5. *Materia Medica,* as outlined in present courses in the college of homeopathic medicine and surgery.
6. *Pharmacy.*
7. *History and Methodology of Medicine.*

### FOURTH YEAR.

1. *Human Anatomy,* as outlined in Courses V and VI, department of anatomy, college of homeopathic medicine and surgery.
2. *Histology and Embryology,* as outlined in Courses III and IV, department of histology and embroyology, college of homeopathic medicine and surgery.
3. *Medical Chemistry,* courses continued as outlined in third year.
4. *Physiology,* as outlined in Courses III, IV and V, department of physiology, college of homeopathic medicine and surgery.
5. *Therapeutics,* as outlined in present courses in the college of homeopathic medicine and surgery.
6. *Bacteriology, and General Pathology,* as outlined in Courses I and II, department of pathology and bacteriology, college of homeopathic medicine and surgery.
7. *Materia Medica.*
8. *Surgery and Bandaging.*

### FIFTH AND SIXTH YEARS.

The work of the fifth and sixth years will be essentially the same as is given in the third and fourth years in the college of homeopathic medicine and surgery.

*Note—Students who enter with two years of German may elect French in its stead in the first or second years.

# Courses of Instruction-Six-Year Medical Course

## ANIMAL BIOLOGY.

*Course I. General Zoology.* [3] First year, both semesters.
*Professors Sigerfoos and Oestlund and Assistants.*

Lectures, quizzes and laboratory work. Text-book required,—Hertwig's Manual of Zoology.

This course is a comprehensive study of the principles of structure, physiology and development in animals. In the laboratory a brief study of insects and the dissection of the frog are used as a practical introduction to the course. Then follow a study of cell structure and cell division; a systematic study of representatives of the chief phyla or branches of the animal kingdom; and a study of the elements of embryology as illustrated by the development of the starfish and chick.

*Course VI. Comparative Anatomy of Vertebrates.* [3] Second year, both semesters. *Mr. Brown.*

Lectures, quizzes and laboratory work. The first semester's work is based upon a study of the chordates, cartilaginous and bony fishes and all classes up to the Mammalia.

Laboratory and reference books:

Parker's Zootomy; Parker's and Haswell's Zoology, Vol. 2; Wiedersheim's Comparative Anatomy; Willey's Amphioxus and the Ancestry of the Vertebrates; Gagenbaur—Bell's Comparative Anatomy of Vertebrates.

The second semester is given to a detailed study of the Cat and comparative studies of the Rabbit, Sheep and Man. The laboratory and reference books for the second semester are Davison's Mammalian Anatomy; Jayne's Mammalian Anatomy; Reighard and Jennings' Anatomy of the Cat.

## BOTANY.

*Course I. General Botany.* [3] First year, both semesters. *Dr. Lyon.*

This course comprises a general survey of the plant kingdom with laboratory work on the cell, on algae, lichens, fungi, mosses, ferns, gymno-sperms and flowering plants. Lectures and laboratory. Open to all.

## CHEMISTRY.

*Course I. Inorganic Chemistry.* [3]. First year, first semester.
*Professor Frankforter, Mr. West and Mr. Badger.*

This course is arranged for those who have already had an elementary course in chemistry. The course includes an introduction to physical chemistry with special reference to solutions and the electrolytic dissociation theory. This work is followed by a systematic study of the non-metals from the general standpoint of the Periodic law. Special attention is given to the relationship between the different elements and their analogous compounds.

Note:—A course is offered in the College of Science, Literature and the Arts to those who have not had the elementary course.

*Course II. Inorganic chemistry.* (Continuation of course I.) [3]
First year, second semester. *Professor Frankforter, Mr. West and Mr. Badger.*

This course consists of lectures, recitations and laboratory work on the metals.

*Course III. Qualitative Analysis.* [3] Second year, first semester.
*Asst. Prof. Nicholson, Mr. Anderson and Mr. Wilhoit.*

Lectures, recitations and laboratory work. The course includes the general reactions of the metals and the qualitative separation and identification.

*Course IV. Qualitative Analysis.* [3]. Second year, second semester.
*Asst. Prof. Nicholson, Mr. Anderson and Mr. Wilhoit.*

Lectures, recitations and laboratory work. Reactions, separations and identification of the acids.

*Course V. Organic chemistry.* [3] Third year, second semester.
*Professor Frankforter and Mr. Newton.*

This course includes a study of the different groups of carbon compounds with special reference to those groups which are closely associated with biological processes and Bio-chemistry, bacteriological, pathological chemistry, physiology and materia medica. The course consists of lectures with frequent recitations and laboratory work. The laboratory preparation work included the making and studying of one or more compounds in each important organic group. Some time is devoted to practical organic analysis, including the analytical side of the alcohols and the sugar group.

*Course VI. Toxicology and Hygiene.* [3] Third year, second semester.
*Professors Frankforter and Harding and Mr. Newton.*

*Toxicology.*—This course includes the general methods for the separation and identification of the poisons both organic and inorganic. Attention will be given to the identification of poisons associated with medicines and with vegetable and animal matter. Besides this qualitative and quantitative work, attention is given to the structure of those organic groups of compounds which have poisonous properties.

*Hygiene.*—Chemistry lectures and laboratory work. This course includes the chemical analysis of air, water and some of the common foods, as milk, sugar and the fruit products, Special at-

## FRENCH.

Students who enter with two years of German may elect French instead in the first or second year.

*Course I. French beginning.* [5] First year, both semesters.
*Mr. Frelin, Mme. Bertin, Mr. Melom.*

Fraser and Squair's French Grammar and Reader; *modern texts.*

*Course II. French, intermediate.* [3] Second year, both semesters.
*Professor Benton, Mme. Bertin.*

Grammar and composition continued; modern texts will be read including selections from Merimee, Daudet and Scribe.

*Course III. French conversation.* [2] Second year, both semesters.
*Professor Benton, Mme. Bertin.*

[Note: May be taken with course II.]

## GERMAN LANGUAGE AND LITERATURE.

*Course I. German, beginning.* [5], First year, both semesters.
*Professor Schlenker, Assistant Professor Wilkin,*
*Mr. Juergensen and Mr. Burkhard.*

Pronunciation, grammar, selections in prose and verse. German conversation and composition (Bernhardt); short stories.

*Course II. German, intermediate.* [3] Second year, both semesters.
*Assistant Professor Wilkin, Mr. Juergensen, Mr. Burkhard*
*and Mr. Williams.*

First semester,—Selections from modern prose, narrative and descriptive; German lyrics and ballads. Second semester, A drama of Lessing, Goethe or Schiller. Open to students who have completed course I.

*Course III. Scientific prose, intermediate.* [3] Second year, both semesters.
*Mr. Juergensen.*

First semester,—Hodge's German Science Reader (or equivalent). Second semester,—Brandt and Day's German Scientific Reading. This course aims to give the student a reading knowledge of German for the use of the language in his scientific studies. Open to students who have completed course I.

[Note: students must take either II. or III.]

*Course IV. Classic prose and poetry.* [3] First year, both semesters.
*Professor Moore, Assistant Professor Wilkin, Mr. Burkhara and Mr. Williams.*

First semester,—Schiller's Historische Skizzen or Heine's Harzreise; Spanhoofd's Deutsche Grammatik.

Second semester,—Goethe's Prosa and Gedichte; Deutsche Grammatik completed.

[Note: open to those who have had two years High School German].

*Course V. Conversation and composition.* [2] Second year, both semesters.
*Assistant Professor Wilkin, Mr. Juergensen and Mr. Williams.*

Translation into German of short English selections; conversation on topics of every day life; narrative and descriptive essays, and letters in German.

[Note: this course may be taken with either II. or III.]

*Course VI. The drama.* [3] Second year, both semesters.
*Professor Schlenker, Assistant Professor Wilkin, Mr. Juergensen and Mr. Burkhard.*

First semester,—Modern drama. Sudermann's Johannes, and Hebbel's Herodes und Mariamne. Study of the present day drama in Germany. Assigned readings and reports; occasional lectures on related subjects.

Second semester,—Classic drama. Lessing's Nathan der Weise and Goethe's Egmont. Study of dramatic structure; history of the drama in the 18th century. Open to students who have completed either course II., III. or IV.

*Course VII. Advanced scientific reading.* [3] Second year, both semesters.
*Mr. Juergensen.*

Reading of monographs and periodicals.

[Note: students must take course VI. or VII. during second year].

*Course VIII. Advanced composition and conversation.* [2]
Second year, both semesters.
*Professor Schlenker and Assistant Professor Wilkin.*

Translation into German of longer selections from good English authors; original essays in German on assigned themes; oral debates; oral reports in German on collateral readings in German and English authors.

[Note: this course may be taken with either VI. or VII.]

## MATHEMATICS.

*Course III. Higher algebra.* [3] First year, first semester.
*Assistant Professor Bauer, Dr. Manchester, Mr. Dalaker and Mr. Shumway.*

Variation, quadratic equations, special higher equations, simultaneous equations of the second degree, maxima and minima of algebraic functions, differentiation of algebraic functions, development of functions, logarithms, theory of equations and solution of numerical higher equations.

*Course IV. Trigonometry.* [3] First year, second semester.
*Assistant Professor Bauer, Dr. Manchester, Mr. Dalaker and Mr. Shumway.*

Text, tables and numerous applications.

## PHYSICS.

*Course I. Physics.* [6] Second year, both semesters.
*Professor Jones and Assistants.*

Mechanics, properties of matter, heat, sound, experimental lectures, recitations and laboratory work. Open to those who have completed the higher algebra and trigonometry courses III. and IV. in mathematics.

## RHETORIC.

*Course I. Rhetoric.* [3] *Professor Sanford.* Second year, both semesters. This course includes the study of formal rhetoric, the writing of compositions, and the study and analysis of masterpieces of prose. Specially adapted to the need of medical students.

## PHYSICAL CULTURE.

### DRS. COOKE AND LITZENBERG.

A well equipped gymnasium in charge of a professional medical director is open for the young men. The training and exercise is under the immediate oversight and authority of the medical director and is wholly with a view to the healthful physical development of the whole student body.

All young men are required to be examined by the medical director of physical culture upon registration and during the course as often as the indications of the physical condition may require.

The decision of the director will be either:

1. Advisory, indicating what course of hygiene and exercise will best sustain and improve the health of the student, or
2. Mandatory, requiring the students to pursue the course of hygiene and physical exercise necessary for the proper care of health and the discharge of their duties as students.

Gymnasium work is required of all men in the freshman class, one hour per week (in two half-hour periods if the director so decides) throughout the year. The required work includes a course of lectures on personal hygiene, during the first term.

## MILITARY SCIENCE AND TACTICS.

### CAPTAIN EDWARD SIGERFOOS Ph. B., 5th U. S. INFANTRY.

For the instruction in military drill and administration the students are organized into a corps of cadets, consisting of three battalions of infantry, and a platoon of artillery.

A uniform of prescribed pattern is worn by all cadets during drill.

The uniform consists of blouse, trousers, vest and cap, modelled after the U. S. Military Academy cadet uniform, and costs in Minneapolis about $15, and is as neat and economical dress as the student can obtain.

Drill is required of all men in the freshman and sophomore classes.

In view of the fact that, beginning with September, 1907, the College of homoeopathic Medicine and Surgery will require two years' College work for entrance, it becomes very desirable that students intending to take up Medicine should matriculate in the six-year course upon entering the University and thus secure both degrees.

Students who wish to enter this combined course will receive equivalent credit for College work done elsewhere.

# Seven-Years' Course Leading to the Degrees of A. B. and M. D.

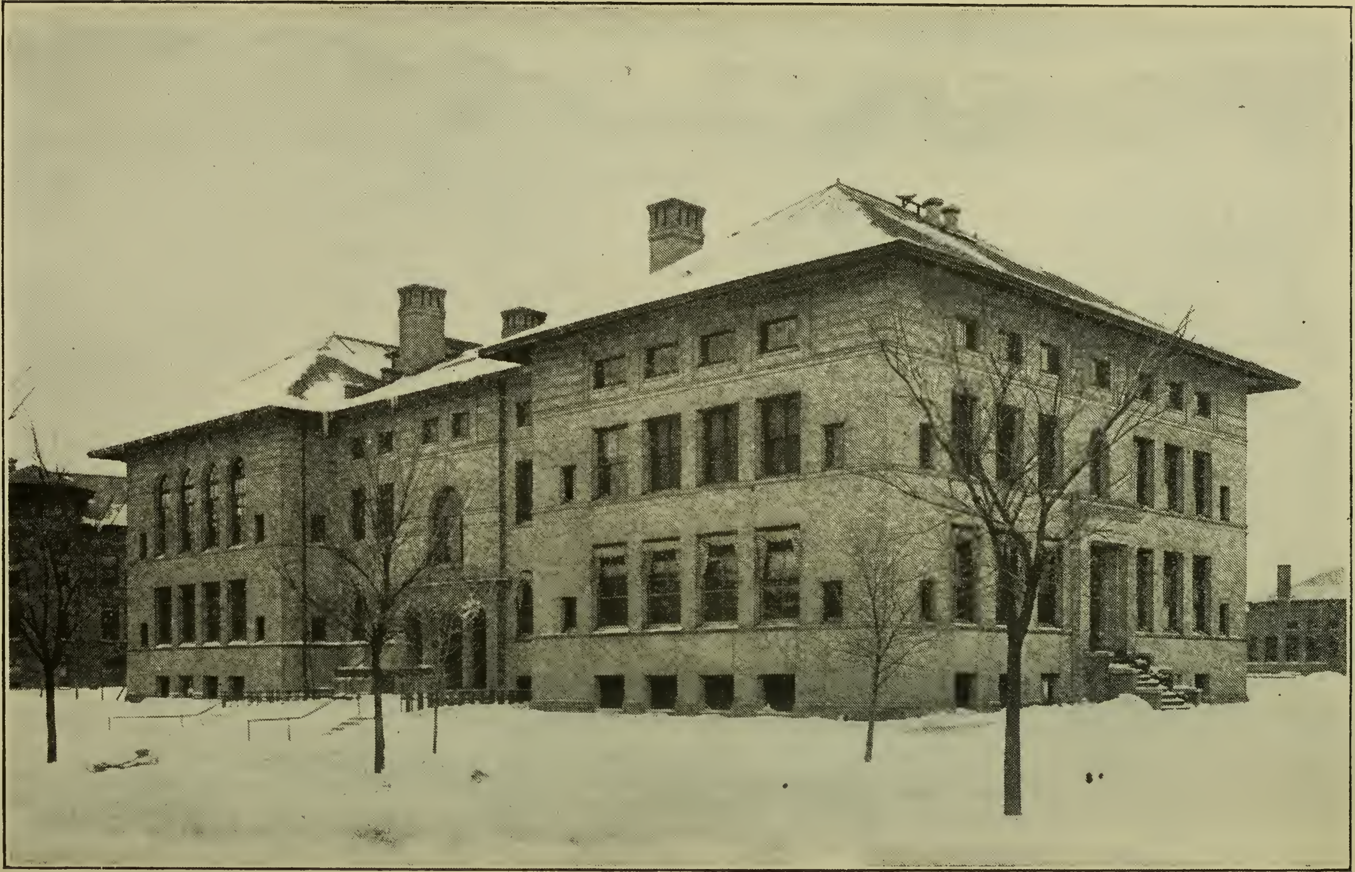
Seniors in the College of Science, Literature and the Arts and in other colleges, who contemplate entering the College of Medicine and Surgery, are permitted to elect courses in Anatomy, Histology and Embryology, Physiology and Chemistry in this college in lieu of similar science courses in the College of Science, Literature and the Arts or in other colleges. Since the medical practice act of this state requires full four years of medical study, these students must elect this work in the College of Medicine and Surgery, in order that it may be contributive toward the two degrees given in both colleges.

## AFFILIATION WITH OTHER COLLEGES.

Carleton College has entered into an arrangement with the University of Minnesota whereby students from Carleton who have completed three full years' work without conditions and who have also met all the requirements for admission to the College of Medicine and Surgery may elect as the work of their Senior year the first year's work in the College of Medicine and Surgery, upon the satisfactory completion of which they will receive a bachelor's degree from Carleton College.

By this arrangement students from this college, having satisfactorily completed their four years' work in the College of Medicine and Surgery, will have received both degrees in a period of seven years.

Opportunity is offered to other colleges meeting the University requirements to enter into similar relations of affiliation for the purpose of shortening the time whereby a student can secure both degrees.



Laboratory of Histology and Embryology MEDICAL SCIENCE BUILDING Laboratory of Physiology

ANATOMY
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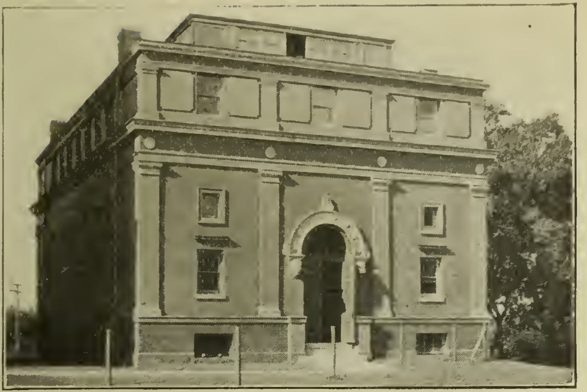

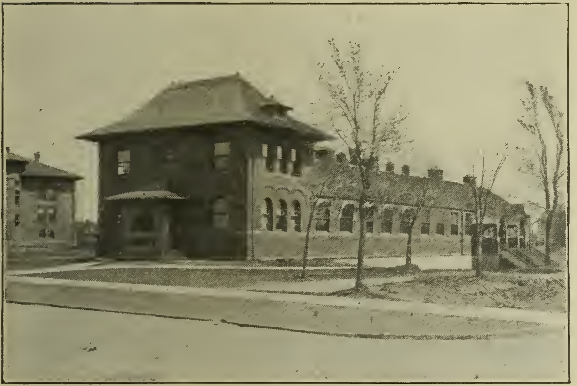

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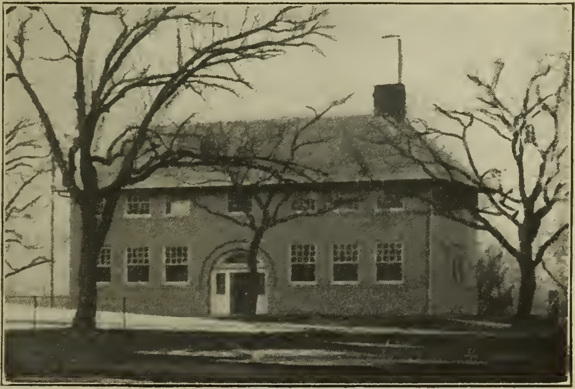
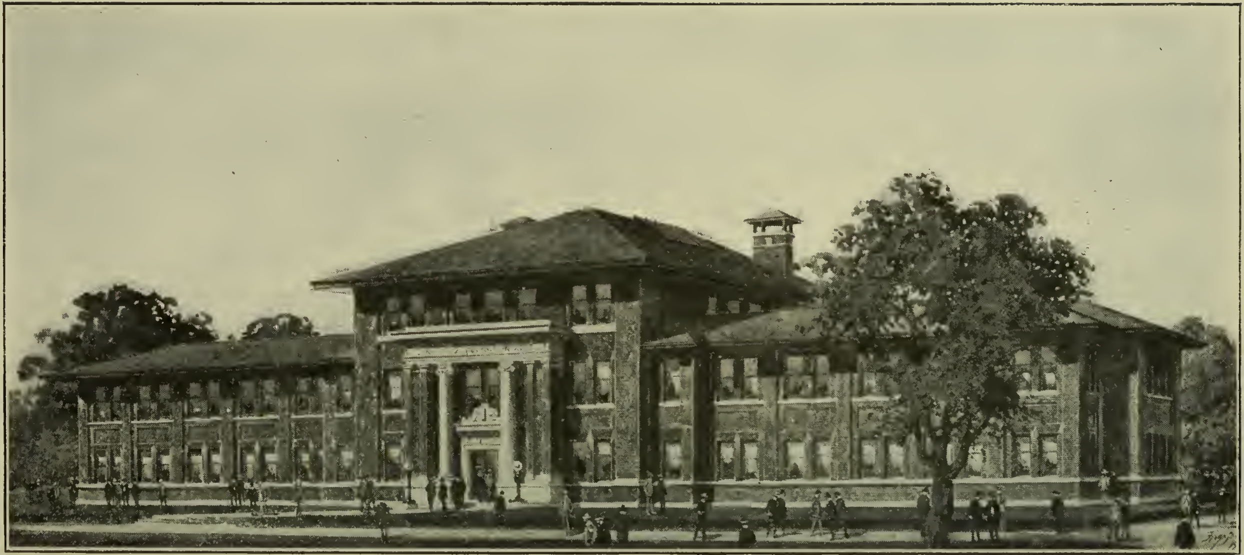




Institute of Public Health and Pathology

# Courses of Instruction

## DEPARTMENT OF HISTOLOGY AND EMBRYOLOGY.

### OFFICERS OF INSTRUCTION.

THOMAS GEORGE LEE, B. S., M. D., *Professor Histology and Embryology.*
WINFIELD S. NICKERSON, Sc. D., M. D., *Assistant Professor of Histology.*
MARGARET L. NICKERSON, A. M., M. D., *Instructor in Histology.*
ERNEST V. SMITH, *Assistant in Histology.*
JARL FERDINAND LEMSTROM, Ph. K., *Assistant in Micro-Technique.*
AMOS S. WELLS, A. B., D. D. S., *Assistant in Dental Histology.*
FREDERICK HAROLD POPPE, B. A., *Assistant in Dental Histology.*
Departmental Laboratory Assistants: Henry Theodore Foshager, B. S., Martin Oyen, Mathias Sundt, B. A., Charles Stewart Sutton, B. A.

This department occupies the entire north wing and center of the Medical Science Building, and includes two general laboratories, each 44 x 72 feet, which are finely lighted by windows on three sides and part of the fourth. These laboratories provide for the general courses in histology, microscopic anatomy, neurology, embryology, micro-technique. Each student is provided with a sink, gas, electric light, copper heating table, microscope locker and microscope, and a locker for the storage of apparatus and material. Several smaller laboratories are provided for special, elective and other courses; in addition there are preparation rooms, store rooms, animal rooms, rooms for experimental work in histology and embryology, for reconstruction, chemical, photographic and photomicrographic work.

A departmental library which contains a carefully selected collection of reference literature, both standard and periodical. In addition to the laboratory library, the other libraries of the University, together with the Public libraries of Minneapolis and St. Paul, afford the students access to almost all the important literature relating to the work in this department.

These laboratories are equipped with Leitz' microscopes, each fitted with nose-piece and Abbe condenser; various forms of microtomes, such as freezing, Thoma, Minot, Schanze, etc., injection apparatus, aquaria, thermostats, incubators, water baths, chemical hoods, a great variety of technical glassware. Grubler's stains, a set of His' wax models, photomicrographic and reconstruction apparatus, charts, reference cabinets containing carefully selected slides, a large collection of hardened histological and embryological material with an abundant supply of fresh tissues.

The courses are made as practical as possible, beginning with the technique of the microscope, followed by the preparation of permanent specimens. In addition, there is a valuable loan collection of several thousand specially prepared histological slides and a large number of series of mammalian and other embryos, sufficient to provide each student with several complete series of various ages and different planes for study. These collections are being constantly increased and are of sufficient value to have warranted the construction of a fire-proof vault 15x17 feet, for their preservation.

During the two years' course the student will acquire a valuable collection of slides of his own preparation illustrating the structure and development of the human body.

The course is illustrated by charts and lantern-slides of histological and embryological specimens. Demonstrations are given under the microscope of typical sections of tissues and organs, accompanied by camera lucida drawings, or photomicrographs, with explanatory text.

All students are recommended to purchase a microscope at the beginning of their medical course. This instrument is an indispensable part of the outfit of a well-trained physician. Suitable microscopes can be purchased at from $50 to $60, which may be fitted at any time with such other parts as may be desired.

Students not owning microscopes will be furnished with instruments at a rental fee.

*Course I. General morphology and histology.*
***Professor Lee, Assistant Professor Nickerson and Dr. M. L. Nickerson.***
Lectures, recitations, demonstrations and laboratory work. The course includes the structure and manipulation of the microscope; the structure and properties of the protoplasm; the cell, its structure; cell division and reproduction leading to the consideration of the elements of structure in the vertebrata. A comparative study of the histology of the blood, of the epithelial, connective, muscular and nervous tissues and of the vascular and lymphatic systems of man and the vertebrata. Lectures, etc., 6 hours a week, Laboratory work, 18 hours a week, first half, first semester, first year.

*Course II. Elements of vertebrate embryology and histogenesis.*
***Professor Lee, Assistant Professor Nickerson and Dr. M. L. Nickerson.***
Lectures, recitations, demonstrations and laboratory work. A comparative study of reproduction; the ovum, the spermatozoon, fertilization, cleavage, formation of blastodermic layers, the formation of the embryo, foetal envelopes, etc., with practical work on chick and mammalian frog embryos. The differentiation and histogenesis of the tissues, etc. Lectures, etc., 6 hours a week; laboratory work, 18 hours a week, first semester, first year. Open to those who have completed course I.

*Course III. Microscopic anatomy of man and vertebrates.*
***Professor Lee, Assistant Professor Nickerson and Dr. M. L. Nickerson.***
Lectures, recitations, demonstrations and laboratory work. Advanced methods of histological technique, with practical laboratory work. The comparative study of the morphology, microscopic anatomy, origin and development of the various organs of the integumentary, alimentary, respiratory and uro-genital systems, etc. Lectures, etc., 6 hours a week; laboratory work, 18 hours a week. First semester, first year. Open to those who have completed course I in histology and embryology.

*Course IV. Vertebrate neurology and neurogenesis.*
***Professor Lee, Assistant Professor Nickerson and Dr. M. L. Nickerson.***
Lectures, recitations, demonstrations and laboratory work. A comparative study of the morphology, microscopic anatomy, origin tention is given to food adulterations, and to food preservations. and development of the central, peripheral and sympathetic nervous systems and the organs of special sense. Lectures, etc., 6 hours a week; laboratory, 18 hours a week. First half, second semester, second year.

*Course V. Human embryology and organogenesis.*
***Professor Lee, Assistant Professor Nickerson and Dr. M. L. Nickerson.***
A comparative study of human mammalian embryos, including impregnation, segementation, and implantation of the ovum; the formation, structure and relationships of the placenta and foetal envelopes; the details of organogenesis, etc., studied in a practical manner upon a very large collection of serial sections of human and mammalian embryos, cut in various planes and representing all phases of development. Lectures, etc., 6 hours a week, laboratory, 18 hours a week. First half, second semester, second year.

*Course VI. Dental histology and embryology.*
***Professor Lee, Drs. M. L. Nickerson and A. S. Wells.***
A course modified from I., III. *and* V. especially arranged for and open only to Dental students. Lectures, recitations and laboratory work; the structure and histogenesis of the tissues and organs; the structure and development of the teeth and jaws, the mouth cavity and glands. Lectures, etc., 6 hours, laboratory 12 hours per week. Second half, first semester, first year.

## ELECTIVE AND GRADUATE COURSES.

The following elective courses are open to a limited number of properly qualified third and fourth-year students, and to graduates. These courses will consist of laboratory work, lectures, demonstrations and prescribed courses of reading, and will be made as practical as possible, being planned with special reference to their application to internal medicine, surgery, obstetrics and the specialities.

For dates see schedule and for details of courses consult Professor Lee.

*Course VI. Methods of microscopical technique.* *Professor Lee.*
The preparation and use of the various solutions employed in fixing, hardening and staining. Methods of embedding, sectioning, reconstruction, etc.

*Course VII. Comparative histology and histogenesis of the tissues of man and vertebrates. Professor Lee, Assistant Professor Nickerson, Dr. M. L. Nickerson.*

(a) The cell, spermatogenesis and ovogenesis.
(b) The epithelial, connective and muscular tissues.
(c) The nervous tissues.
(d) Blood and lymph.

*Course VIII. Microscopic anatomy and organogenesis of man and vertebrates. Professor Lee, Assistant Professor Nickerson, Dr. M. L. Nickerson.*

(a) The digestive system.
(b) The respiratory system.
(c) The cutaneous system.
(d) The uro-genital system.

*Course IX. Comparative histology and development of central nervous system and special sense organs.* *Professor Lee*

*Course X. The animal parasites of man.* *Assistant Professor Nickerson.*
The general outlines of the morphology and classification of the different groups which contain members parasitic upon man, with special consideration of each species of medical importance, including its distribution, life history, methods of infection, means for diagnosis, and the chief symptoms produced by it. The course is illustrated by the study of many specimens, charts, lantern slides, etc.

Open to third and fourth year students. Second half, second semester.

*Course XI. Comparative embryology of man and vertebrates.* *Professor Lee.*
A study of special problems in vertebrate development.

*Course XII. Research work in histology and embryology* *Professor Lee.*
Every facility in the way of apparatus, material, literature and private rooms for study will be offered those who desire to take up any original investigation in vertebrate histology and embryology, human or comparative.

The following text and reference books should be consulted:

*Histology.* Wilson's The Cell; Bohm-Davidoff-Huber's Histology; Stohr's Histology; Bailey's Histology; Piersol's Histology; Ferguson's Histology; Szymonowicz-MacCullum's Histology; Sobotta-Huber's Atlas; Klein's Histology; Mann's Histology; Lee's Vade Mecum; Kolliker's Gewebelehre; Oppel's Microskopishchen Anatomie; Duval's Histologie; Ranvier's Histologie.

*Embryology.* Minot's Human Embryology; Minot's Laboratory text books; Hertwig-Mark's Embryology; McMurrich's Embryology; Heisler's Embryology; Marshall's Embryology; Kolliker's Embryologie; Schultze's Embryologie; Kollman's Embryologie; Schenk's Embryologie; Reese's Embryology.

*Neurology.* Barker's Nervous System; Edinger's Vorlesungen; Lectures Nervous System; Gordinier's Nervous System; Van Gehuchten's System Nerveux; Kolliker's Gewebelehre; Obersteiner; Sabin's Atlas.

## DEPARTMENT OF ANATOMY.

### OFFICERS OF INSTRUCTION.

Charles A. Erdman, M. D., *Professor of Anatomy.*
Harry K. Read, M. D., *Demonstrator of Anatomy.*
Earle H. Hare, M. D., *Prosector of Anatomy.*
C. C. Tyrell, B. A., *Assistant in Anatomy.*
E. E. Heminway, Ph. D., *Assistant in Anatomy.*

### ANATOMY.

The department of anatomy occupies a separate building, adapted to its work and equipped with the best modern appliances. It includes two large students' dissecting rooms, the general laboratories of anatomy, a bone laboratory for bone research work, the offices of the professor and demonstrator of anatomy, preparation rooms and morgue. An ample supply of dissecting material is provided.

In the first year the subjects of osteology and syndesmology are pursued by means of lectures, laboratory demonstrations and recitations from the specimen.

The bones of a human skeleton are loaned to the student for purposes of study and recitation.

Myology, angiology and splanchnology are studied in connection with the dissection and laboratory demonstrations of the thoracic, abdominal and pelvic viscera upon the lower animal. This is followed by the dissection of one-half of the human body.

In the second year the alimentary canal, respiratory tract, genito-urinary system, organs of special sense and the cerebro-spinal nervous system are pursued by means of lectures, recitations and laboratory demonstrations. The dissection of the human body is completed and followed by a series of lectures and demonstrations on descriptive and surgical anatomy.

The student dissects in the first semester of the first year and in the first half of the second semester of the second year, recites upon the subject and observes demonstrations made by a corps of assistants under the direction of the demonstrator of anatomy.

Dissection is supplemented by drawings from dissections, made upon outlines of the human skeleton, which are furnished to the student.

In the third year the student takes up the study of the human body from a topographical and surgical standpoint and is given a thorough review of the surgical regions, emphasizing the practical points in the relations, structure and distribution of the nervous system.

*Course I. Osteology.*

Lectures and recitations upon the human skeleton and supplementary work on the osteology of domestic mammals; 12 hours each week, for 5 weeks of first semester. Practical study of the skeleton, followed by recitations from the specimen, taken by the class, first semester. Required of all first year students.

*Course II. Syndesmology.*

Lectures, recitations and laboratory demonstrations, 12 hours each week, for 2 weeks first semester, first year. Open to those who have taken course I.

*Course III. Myology and Angiology.*

Lectures and recitations, covering the entire muscular and arterial systems of the human body, with a supplementary study of comparative myology. Laboratory work consists in the dissection and identification of the muscles of the human body and the study of their nerve and blood supply, as well as their action.

*Course IV. Splanchnology.* *Professor Erdmann, Dr. Read and Dr. Hare.*

Lectures and laboratory work in dissecting and demonstrating the thoracic, abdominal and pelvic viscera. First semester of the first year and first half of second semester of the second year.

Recitations upon the subjects of the first year's work, conducted in sections.

*Course V. The nervous system.* *Professor Erdmann.*

Cerebro-spinal axis and its membranes; the cranial and spinal nerves; the sympathetic nervous system, and the special-sense organs. Lectures, recitations and dissections of the brain, 5 hours each week, for 4 weeks, first half, second semester, second year.

*Course VI. Dissections.* *Drs. H. K. Read, E. R. Hare and Professor Erdmann.*

This work extends over a period of 9 weeks, in the first semester of the first year, and 9 weeks in the first half of the second semester of the second year, occupying with the lecture course the half days of this period each week. The method of work follows that laid down in Holden's Manual of Dissections.

The second year lecture and dissecting courses are open to those having completed the first year's work in anatomy and histology.

Daily recitations, upon the subjects of the second year's course, conducted in the laboratory.

*Course VII. Surgical anatomy.* *Professor Erdmann*

The instruction consists of dissections, demonstrating the relations of structures composing the surgical regions of the body; demonstrations, upon the living subject, showing the anatomical and surgical landmarks and their applications; also the location, by surface tracings. of the viscera contained in the various cavities and of the important arteries, veins and nerves; 3 hours a week, second half, second semester. Required of third year students.

*Course VIII. Applied anatomy of the nervous system.*

Elective.

Opportunity is afforded for advanced work in practical anatomy at any time during the college year.

The following text-books should be consulted:

Anatomy. Cunningham, Morris', Gray, Spalteholtz Atlas, Barker's Laboratory Manual, Holden's Practical Anatomy, Erdmann's Manual of Dissection, Treve's Applied Anatomy, Barker's Anatomy of the Nervous System.

Collateral Readings. Quain's Anatomy, Gerrish's Anatomy. Flower's Osteology of Mammals, Gegenbauer's Elements of Comparative Anatomy; Chauveau's Comparative Anatomy, Wiedersheim's Elements of Comparative Anatomy, McClellan's Regional Anatomy, Deaver's Surgical Anatomy; Edinger's Anatomy of the Nervous System, Hildebrand's Chirurgisch Topographise Anatomie.

## DEPARTMENT OF PHYSIOLOGY.

### OFFICERS OF INSTRUCTION.

RICHARD OLDING BEARD, M. D., *Professor of Physiology.*

M. RUSSEL WILCOX, M. D., *Demonstrator of Physiology.*

GEORGE D. HAGGARD, M. D., *Instructor in Physiology.*

### COURSES OF INSTRUCTION.

The department of physiology occupies rooms in the laboratory of medical sciences, including the laboratory of experimental physiology, the laboratory of physiologic chemistry, a demonstration and recitation room, the laboratory library and the office of the professor in this branch. A large amphitheatre, adapted to the demonstration of major experiments, immediately adjoins the physiologic laboratories and is used, also, for lecture purposes by this and other chairs.

In the basement of the laboratory of medical sciences, the chair maintains large and well-equipped animal rooms, which are furnished with a large aquarium, frog tanks, animal enclosures and breeding cages. From this animal room are furnished supplies of material and animals for the work in experimental physiology, physiologic chemistry, histology, embryology, pathology and bacteriology. The hygienic conditions of the room are studied carefully, with a view to maintaining the physiologic and structural integrity of its animal occupants as perfectly as possible.

The physiologic laboratories are equipped with a full supply of apparatus, instruments, etc., for experimental purposes, and for the work in physiologic chemistry. Their outfit includes vivisection instruments, artificial respiratory machines, batteries, Du Boise-Reymond coils, galvanometers, rheostats, Despretz signals, moist muscle chambers, kymographions, spring myograph, stethometer, stethoscopes, phonendoscopes, Dudgeon's and Marey's sphygmographs, cardiographs, Runne's chronograph, Roy's tonometer, Gaskell's clamp, oncometers, hæmometers, hæmoglobinometers, hæmatocrits, plethysmograph, ergograph, etc., etc. They are furnished with motor power for the operation of recording apparatus and for the manufacture of apparatus in the laboratory workshop.

The laboratory manufactures its own apparatus in almost every line of work.

The course in physiology is graded in the first and second years. In the first year, the student hears lectures, recites and attends demonstrations and practical exercises in general physiology. These embrace the discussion, and. so far as possible, the observation of the physiologic. ingredients of the animal body; the study of the physiology of cell-life, of the fundamental properties of the cell. of the nutritive media, blood, lymph and chyle; of the elementary functions of nervous system; of the muscular tissues, the connective tissues and the epithelial tissues; of the vascular mechanism; of the alimentary canal; of the organs of secretion, respiration, excretion, and metabolism.

In the second year. the work is as practical as possible and includes the study of advanced physiology, dealing in particular. with the subjects of nutrition, the physiology of development, and the functions of the central and perpheral nervous system. Twelve hours each week, during the first half of the first semester, are occupied in laboratory work in physiologic chemistry. This course affords the student a practical knowledge of the tissues and fluids of the body from a chemical standpoint. It embraces studies in the several classes of proteids. in fats, carbohydrates, bone, muscle, blood, milk, the digestive fluids, glycogen. etc.

A similar number of hours during the second half of the first semester are devoted to experimental physiology. For this work the class is divided into sections and the instruction is individualized so far as possible. The student is familiarized with physiologic apparatus and its uses, with forms of electrical stimulation and with methods of experimentation, while his knowledge of physiologic principles is strengthened by the observation of functional facts. Demonstrative work is combined with the individual experiments performed by the pupil.

A laboratory reference library is accessible to the students for collateral reading.

*Course I. General physiology.* *Professor Beard.*

Lectures, recitations and demonstrations, dealing with the physiologic chemistry of the human body; the physiologic properties of the cell; the nutritive media; the nervous mechanisms in general; the muscular tissues, the connective tissues and the epithelial tissues, as the structural bases of the animal body. Twelve hours a week, first half second semester, first year.

*Course II. Systemic physiology.* *Professor Beard.*

Lectures, recitations, demonstrations and practical exercises. This course includes the physiology of the vascular system; the digestive system; the respiratory system; the secretory and excretory systems; and metabolism. Twelve hours a week, second half second semester, first year. Open to those who have completed course I.

Recitations upon the subject of the first year are conducted in sections of the class. *Professor Beard, Drs. M. R. Wilcox and G. D. Haggard.*

*Course III. Advanced physiology.* *Professor Beard.*

Lectures, recitations and demonstrations. The course includes the discussion of the subjects of nutrition; of reproduction; of the physiologic changes incident to successive periods of life, and of the functions of the nervous system, six hours a week, first semester, second year. Open to those who have completed the courses in physiology of the first year.

Recitations upon the subjects of this course are conducted in sections of the class. *Professor Beard and Drs. Wilcox and Haggard.*

*Course IV. Physiologic chemistry and microscopy.* *Professor Beard, Drs. M. R. Wilcox and G. D. Haggard.*

Laboratory work and demonstrations. A practical study of the several classes of proteids; of carbohydrates, fats, muscle and bone; of gastric juice, saliva, pancreatic juice and bile in their respective digestions; of glycogen, and of blood, lymph, chyle and milk. Microscopic study of the carbohydrates in vegetable and animal forms; of the physiologic emulsions of fat; of the crystalline waste products, and of the physiologic conditions of the blood cells and of blood crystals. Practical instruction is given during this course in the enumeration of the blood cells, in the estimation of hæmoglobin and of the corpuscles in mass, in the spectroscopic examination of the blood, in the determination of blood tests, etc. Twelve hours a week, first half of first semester, second year. Open to those who have completed courses I and II.

*Course V. Experimental physiology.* *Professor Beard, Drs. M. R. Wilcox and G. D. Haggard.*

Laboratory work and demonstrations. A study of physiologic apparatus, electrical stimuli and methods of experimentation; the demonstration and performance of experiments which illustrate physiologic function in the muscular, nervous, vascular, respiratory and glandular systems; and the study of the cardiac areas, the heart and respiratory sounds, and of pulse tracings, including training in the use of the sphygmograph, the stethoscope, phonendoscope, etc. Six hours a week, second half of first semester, second year. Open to those who have completed course IV.

*Text-Books:*

First and second years—

Howell's American Text-Book of Physiology.
Foster's Physiology, sixth edition.
Simon's Physiologic Chemistry.
Waller's Human Physiology.

Collateral Reading—Landois and Stirling's Handbook of Physiology; Chapman's Physiology: Stewart's Practical Physiology; Blyth's Foods; Raymond's Physiology; Kirk's Physiology; Hutchinson's Dietetics.

## DEPARTMENT OF CHEMISTRY.

George B. Frankforter, A. M., Ph. D., *Dean of the School of Chemistry, Professor of Chemistry.*

Chas. F. Sidener, B. S., *Professor of Chemistry.*

Herbert C. Carel, B. S., *Professor of Chemistry.*

Edward E. Nicholson, M. A., *Assistant Professor of Chemistry.*

Everhart P. Harding, M. S., Ph. D., *Assistant Professor of Chemistry.*

Ira Harris Derby, B. S., *Demonstrator in Chemistry.*

Lillian Cohen, M. S., *Instructor in Chemistry.*

Albert D. Wilhoit, B. A., *Instructor in Chemistry.*

Rodney West, B. A., *Instructor in Chemistry.*

Harold M. Newton, *Instructor in Chemistry.*

Chemistry is taught to the medical and all other students of the University in the School of Chemistry under the directorship of Dean Frankforter. The School of Chemistry is housed in two buildings.

The main building formerly known as Science Hall has been completetly remodeled to meet the needs of the department of chemistry. The building is 198 by 78 feet and consists of several large laboratories well equipped for a wide range of chemical work. The general laboratory is located on the first floor and is large enough to accomodate 350 students. The laboratory tables are arranged with cupboards, drawers and locks and supplied with gas and water. Connected with this laboratory by means of sliding windows, is a preparation room which is directly joined to the general store room. The remaining part of this floor is given to cloak rooms, furnace and motor rooms, and a large lecture room with a gallery designed to comfortably seat 350 students. The qualitative laboratory, located on the second floor, is arranged with tables similar to those of the general laboratory and will accomodate 250 students. The library and three technical laboratories are likewise on this floor. The third floor contains the quantitative laboratory large enough to accommodate 120 students. Directly connected with this laboratory are the balance, preparation, evaporation and drying rooms. There are also on this floor, six special laboratories, an organic laboratory, a physical laboratory, a lecture room and a museum. There is a suite of rooms on the fourth floor entirely given to photography.

*Library.* The chemical library contains complete sets of many of the more important journals. It contains besides these special sets, a well represented list of analytical and technical works, as well as many rare old works of great historical value. Most of the important journals are taken, thus enabling the student to keep abreast of the times. All books are easily accessible, with only the necessary restrictions to guard against injury and loss.

The second building which is one of the units of the medical quadrangle, contains two large laboratories with a combined floor space of 3,800 sq. ft., a smaller laboratory equipped to accomodate students in quantitative analysis, a lecture room, a preparation room, balance room, store rooms and the private laboratories of the instructors.

### COURSES IN CHEMISTRY.

*Course I. General Chemistry.* Professor Frankforter.
Lectures and laboratory work. The course includes a detailed study of chemical and physical properties of the non-metals and their more important compounds, with an introduction to organic chemistry.

*Course II. Advanced Inorganic Chemistry.*
Professor Frankforter, Mr. West and Mr. Badger.
This course is arranged for those who have already had an elementary course in chemistry. The course includes an introduction to physical chemistry with special reference to the laws of solutions and electrolytic dissociation theory. This work is followed by a systematic study of the non-metals from the general standpoint of the periodic law. Special attention is given to the relationship between the different elements and their analogous compounds.

*Course III. Inorganic Chemistry.* (Continuation of Course II.)

PROFESSOR FRANKFORTER, MR. WEST AND MR. BADGER.

This course consists of lectures, recitations and laboratory work on the metals.

*Course IV. Qualitative Analysis.*

ASSISTANT PROFESSOR NICHOLSON, MR. ANDERSON, AND MR. WILHOIT.

Lectures, recitations and laboratory work. The course includes the general reactions of the metals and the qualitative separation and identification.

*Course V. Qualitative Analysis.*

ASSISTANT PROFESSOR NICHOLSON, MR. ANDERSON, AND MR. WILHOIT.

Lectures, recitations and laboratory work. Reactions, separations and identifications of the acids.

*Course VI. Organic Chemistry.*

PROFESSOR FRANKFORTER AND MR. NEWTON.

This course includes a study of the different groups of carbon compounds with special reference to those groups which are closely associated with biological processes and bio-chemistry, bacteriological, pathological chemistry, physiology and materia medica. The course consists of lectures with frequent recitations and laboratory work. The laboratory preparation work included the making and studying of one or more compounds in each important organic group. Some time is devoted to practical organic analysis, including the analytical side of the alcohols and the sugar group.

*Course VII. Toxicology and Hygiene.*

PROFESSOR FRANKFORTER, PROFESSOR HARDING AND MR. NEWTON.

Toxicology.—This course includes the general methods for the separation and identification of the poisons both organic and inorganic. Attention will be given to the identification of poisons associated with medicines and with vegetable and animal matter. Besides this qualitative and quantitative work, attention is given to the structure of those organic groups of compounds which have poisonous properties.

Hygiene.—Chemistry lectures and laboratory work. This course includes the chemical analysis of air, water, and some of the common foods, milk sugar and fruit products. Special attention is given to food adulterations and to food preservations.

For work in other special or technical lines of chemistry, numerous courses are offered (see Bulletin of the School of Chemistry). Facilities for research work are also afforded in a large number of lines.

The analysis of the urine is dealt with under physiological chemistry in the department of Physiology, in the pathology of the urinary system in the Department of Pathology and in the clinical laboratories in connection with the microscopy of the urine.

## DEPARTMENT OF MATERIA MEDICA AND THERAPEUTICS.

### OFFICERS OF INSTRUCTION.

HENRY MARTYN BRACKEN, M. D., L. R. C. S. (Edin.), *Professor of Materia Medica and Therapeutics.*

WILLIAM H. CONDIT, B. S., M. D., *Instructor in Materia Medica.*

The work in materia medica and therapeutics is graded to cover a period of three years. It consists of lectures, recitations and demonstrations, conducted in the laboratory of materia medica. This laboratory is in Medical Hall. Pharmaceutical preparations are placed before the student and he is taught the method of their prepration in their most eligible forms.

*Course I. Pharmacology.* *Professor Bracken.*

This course includes the study of the general characteristics of drugs and of their physiologic actions. Lectures, recitations and laboratory work. Five hours a week, second semester, second year.

*Course II. Therapeutics.* *Professor Bracken.*
In this course drugs are studied in groups, as governed by their physiologic action, and the therapeutic features of such groups are described. Other remedial measures than those depending upon drugs, are fully considered. Lectures and recitations, four hours a week, first semester, third year.

*Course III. Therapeutics.* *Professor Bracken.*
In this course the treatment of individual diseases is studied and the application of therapeutic agents to them is discussed. Lectures. Two hours a week, first semester, fourth year.

*Text-Books:*
Collateral Reading.—The Pharmacopeia of the U. S.; The National Dispensatory; Sayre's Organic Materia Medica and Pharmacognosy; Culbreth's Materia Medica and Pharmacology.

## DEPARTMENT OF PATHOLOGY AND BACTERIOLOGY.

### OFFICERS OF INSTRUCTION.

F. F. Wesbrook, M. A., M. D., C. M., *Professor of Pathology and Bacteriology.*

S. Marx White, B. S., M. D., *Assistant Professor of Pathology and Bacteriology.*

Hibbert Winslow Hill, M. D., *Assistant Professor of Bacteriology.*

L. B. Wilson, M. D., *Assistant Professor of Clinical Pathology.*

R. H. Mullin, B. A., M. B., *Senior Demonstrator of Pathology and Bacteriology.*

J. L. Rothrock, A. M., M. D., *Clinical Instructor in Pathology.*

A. S. Hamilton, B. S., M. D., *Instructor in the Pathology of the Nervous System.*

Hospital Laboratory Assistants:—E. L. Tuohy, B. A., M. D.; C. C. Pratt; Geo. N. Freeman, M. D.; Henry Goehrs, M. D.; Oliver M. Porter, M. D.; Nathan C. Bulkley; Lee A. Scace.

Departmental Laboratory Assistants:—John P. Schneider; Harry J. Bartron; Ed. Moren; R. A. Varco, B. A.; Earl H. Current; Thos. R. Martin, B. A., R. H. Labbitt; Carl O. Estrem, B. A.; J. P. Weyrens, B. S.

The Institute of Public Health and Pathology, to which attention has already been directed, provides adequate room and facilities for teaching and research in pathology, bacteriology and public health.

The main laboratory 56x75 feet lighted on three sides and by a skylight, is used for the general or required courses. It is divided into twelve loges, each fully and independently equipped in every detail for the use of six students. who are responsible for all equipment therein contained. Supplies are distributed from a supply room opening off the main laboratory. Books and specimens required in teaching are easily procurable from the museum which is connected by a special or private passageway with the main laboratory. A combined lecture and autopsy room opens both from the main laboratory and from the hall so that autopsies, lantern demonstrations or lectures may be given during the period devoted to the laboratory exercises without interference with the practical work.

A smaller laboratory, one-half the size of the main laboratory, is provided for special work in graduate and optional courses in the Diagnosis of Tumors, Pathology of the Nervous System, Practical Public Health, etc. The same loge arrangement obtains as in the main laboratory.

The hospitals of Minneapolis, St. Paul, Duluth, Rochester and St. Peter, Minn., in which members of the staff are working, afford a large supply of material and frequent opportunities for post-mortem examinations. From many institutions and physicians throughout the state, valuable and interesting gross and microscopic materials are received from time to time and are made available in the museum and for macroscopic and microscopic class use.

The State Board of Health laboratories for research and routine investigation are located in the Institute as well as a Pasteur Institute for the study and treatment of rabies. This affords an abundance of illustrative material for Public health, pathology and bacteriology.

A full equipment of microscopes permits of the rental of an instrument to each student, if he is unprovided with one suitable for his purpose.

*Course I. General bacteriology.*

*Professor Wesbrook, Assistant Professor Hill and Dr. Mullin.*

Lectures and demonstrations. The general scope of bacteriology, the history of its development and the biological and chemical problems involved in the life history of bacteria will be dealt with. The classification of the various bacterial forms, the methods of isolation and culture and the composition and manufacture of culture media will be studied until a thorough knowledge of technique is acquired. General and special study of the various antiseptics, disinfectants and bactericidal substances and conditions will be undertaken.

Laboratory work, involving the making of their own culture media by the students, the study of bacteria in cultures and under the microscope, technique of staining and other methods, including observations of chemical and biological peculiarities, will be thoroughly carried out. Testing of various germicides—chemical and physical—and the use of bacteriological methods in the examination of drinking water will form an important part of the work. Bacterial activities concerned in sewage purification, etc., will receive attention. Twenty hours per week during the last eight weeks of the second semester, second year.

*Course II. General pathology.*

*Professor Wesbrook, Dr. Mullin, Assistant Professor White, and Assistant Professor Hill.*

Lectures, demonstrations and laboratory work on the general processes involved in disease, to include the study of inflammation, the degenerations and tumors. Twenty hours per week during the last eight weeks of the second semester, second year.

*Course III. Pathology of special diseases* (includes bacteriology).

Disease processes will be grouped, so far as practicable, according to their etiology. Instruction will be afforded by means of lectures, demonstrations of museum specimens and preparations. and laboratory work on materials secured from clinical cases and at autopsy.

The course will consist of instruction in

1. Pathology of infectious diseases.

(a) Special bacteriology of the infectious diseases with the cultivation on the various media of all the important pathogenic bacteria, sown and kept under observation by each student. Fluids and tissues from clinical cases and autopsies (human and animal) will be supplied for microscopic and cultural examination and an intimate relationship with clinical pathological work maintained.

(b) Special pathology of the infectious diseases. Concurrently with the bacteriology and parasitology of each of the diseases, the pathology of each infection will be studied.

The important gross and microscopic lessons in all the organs will be illustrated from clinical and autopsy material, fresh and preserved, and supplemented by experimental work. Each student will be required to prepare and examine under the microscope selected fresh and stained specimens of morbid tissues, fluids, etc.

*Professor Wesbrook, Assistant Professor White, Dr. Mullin.*

2. Pathological diseases of toxic and obscure origin. Under this are included the special degenerations, inflammations and other pathological conditions not already included under infectious diseases. *Assistant Professor White, Dr. Mullin.*

Sixteen hours per week throughout the first semester of the third year.

*Course IV.* *Assistant Professor White, Dr. Rothrock and Dr. Mullin.*

Autopsies and post-mortem technique. Students will have an opportunity of personally taking part in this work, under the direction of the pathologists in charge, in the hospitals of Minneapolis and St. Paul. A knowledge of the technique of post-mortem work and of morbid anatomy will be thus afforded. Throughout the third and fourth years.

*Course V. Special pathology of the nervous system.* *Dr. A. S. Hamilton.*

An elective course, limited to twenty-five students, in the fourth year.

So far as possible, the clinical history, autopsy notes, gross specimens and sections stained by various special methods will be presented of individual cases representing the principal organic diseases of the nervous system. Twelve hours per week, first four weeks, second semester, fourth year.

*Course VI.* *Assistant Professor White.*

Laboratory course on the microscopic study and diagnosis of tumors. (Elective for a limited number of students in fourth year.)

This course includes the comprehensive study of tumors, with the view of giving the student a knowledge of the methods employed in the laboratory diagnosis of this class of pathological conditions and familiarizing him with the characters of the commoner as well as the rarer types, special attention, however, being given to the latter. It is intended to supplement the course on the surgical pathology of tumors by Professor Stewart. Twelve hours per week, four weeks, second semester, fourth year.

*Course VII. Research work in one of the following lines:*

(a) General pathology.
(b) Special pathology and bacteriology and technique.

Second semester of third and throughout the fourth year, hours assigned.

*Course VIII. Surgical pathology.* *Professor Stewart*

(See principles of surgery.) This course will consist of lectures and laboratory demonstrations and will cover the general subject of the pathological and bacteriological basis of surgery. The lectures will be illustrated by charts and diagrams, by fresh and preserved specimens and, so far as practicable, demonstrations will be given of the various processes of the bacteria concerned. Especial attention will be given to inflammation and its complications, to the infectious diseases of surgical importance and to tumors. Two hours a week, first semester, third year, and two hours per week, second semester, fourth year.

*Text-Books:*

Pathology—
American Text-Book of Pathology.
Ziegler's General and Special Pathology.
Schmaus-Ewing: Pathology and Pathological Anatomy.
Coplin's Manual of Pathology.
Cattell's Post-Mortem Pathology.
Durck-Hektoen: Special Pathologic Histology.
Jakob: Nervous System.
Coat's Manual of Pathology.
Mallory and Wright's Pathological Technique.

Collateral Reading—Hamilton's Text-Book of Pathology; Delafield and Prudden's Handbook of Pathological Anatomy and Histology; Woodhead's Practical Pathology; von Kahlden's Pathological Histology; Thoma's Text-Book of General Pathology; Lubarsch Ostertag, Ergebnisse der Pathologie u Anatomie; Orth, Pathologische Anatomie; Birch-Hirschfield, Pathologische Anatomie; Clifford Allbutt's System of Medicine; Leukhart's die Thierische Parisiten des Menschen; Bouchard, Traite de Pathologie Generale; Eichorst, Pathologie u Therapie; Gaylord and Aschoff, Pathological Histology; Nothnagel, Encyclopedia of Practical Medicine; Wood. Chemical and Microscopical Diagnosis.

Surgical Pathology—
Bland Sutton, Tumors, Innocent and Malignant.

## MATERIA MEDICA AND THERAPEUTICS.

This course upon this subject is graded to cover four years' study. Lectures, daily quizzes and daily demonstrations of materials and methods are held regularly throughout the year.

### FIRST YEAR.

Ten lectures in the first half of the year are given upon the methods of homeopathic pharmacy, each student being trained in writing and filling prescriptions and the technique of the more common preparations. Apparatus and material for these purposes are taken from Professor Leonard's laboratory, which is abundantly supplied with the crude and perfected drugs for demonstration throughout the course. Mr. G. A. Babendrier, who has kindly given this instruction so satisfactorily for several years, will continue the same the coming year.

### SECOND YEAR.

The toxicological and physiological action of a few typical drugs will be studied in lectures and quizzes twice each week; including the action of both large and small doses as well as the official doses (U. S. P.) of the leading drugs and the alkaloids. Here, in the more detailed study of a few drugs, the ground work will be laid for the comprehension of the symptomatology of the later years.

When practicable, actual experiments on the effects of the drugs upon individual persons in the class will be made, the blanks used and methods being under Professor Leonard's personal supervision and in accordance with the rules of the Provers' Union of the American Institute of Homeopathy.

### THIRD YEAR.

Three lectures a week with quizzes, upon the vegetable remedies, about thirty major and seventy-five minor drugs, arranged according to their natural groups and their clinical relationship in diseases, and studied in their origin, history, preparation, physiology and symptomatology, full practical comparison being made with other allied remedies. The endeavor on these studies and those of the following year will be to present only such usage of drugs as is practical and fully corroborated

Three lectures and quizzes each week upon the mineral, animal and nosological remedies of materia medica—about forty major and twenty minor drugs grouped and studied in detail as those of the second year, attention being given to their toxicological and physiological action, where this has a direct bearing upon their homeopathic application to chronic diseases, inasmuch as the drugs of this course are more often applied thereto.

Examination in the form of written review quizzes from time to time or at the end of the term, will be held, the student's final standing being made up of this and his daily quiz markings.

### TEXT-BOOKS AND COLLATERAL READING.

*Materia Medica and Therapeutics.*
- First year—
  - Pharmacopea of the American Institute of Homeopathy.
- Second year—
  - Hugh's Pharmaco-Dynamics.
- Third and fourth years—
  - Materia Medica Manual—Fahnestock.
  - Farrington's or Cowperwaite's Materia Medica Hahnemann's Organon.
  - Reference Books—third and fourth years—Allen's Hand-Book, Hering's Condensed Materia Medica, Dunham's Lectures.

## PRACTICE OF MEDICINE

This course of lectures occupies two hours a week throughout the Junior and Senior years; the object aimed at is to acquaint the Student with the Pathological basis of the various diseases, their symptomatic course and the findings derived from the various methods of physical macro-and microscopical examination, so that with the complete picture of its diseased process and its possibilities, he may intelligently apply all known methods of relief, hydro-therapy, electrical deaction, dietetics, physiological and palliative medication, and above all may scientifically select the homeopathic remedy curative of the diseased process as conditioned by the peculiar susceptibility and idiosyncracy of the individual to be treated.

## TEXT-BOOKS AND COLLATERAL READING.

*Practice of Medicine.*

Goodno's Practice.
Raue's Therapeutics.
Lippe's Repertory.
Knerr's Repertory.
Pepper's System of Medicine.
DaCosta's Diagnosis.
Ander's Practice of Medicine.

## PHYSICAL DIAGNOSIS.

The course on physical diagnosis consists of a series of twenty-four didactic lectures to the third year class, illustrated upon the healthy human subject, thus familiarizing the student with the normal appearances, feelings and sounds. These lectures are classified as follows: Introduction, general examination, respiratory system, circulatory system, digestive system, urinary system.

## CLINICAL MEDICINE.

### FOURTH YEAR CLASS.

For this course abundant material is found in the University homeopathic free dispensary, where clinics are held every day, and in the City hospitals of Minneapolis and St. Paul, where clinics are held each Monday morning.

In these clinics particular effort is made to supplement the course in physical diagnosis and to fully illustrate the application of the homeopathic law of therapeutics.

In order that the student may obtain as wide a view as possible in this all important branch, they receive instruction, not only from Professor Lupkin at the bedside in the City Hospital wards, but from the various members of the homeopathic staffs in the Twin Cities, attending the hospitals but not otherwise connected with the University.

In addition the dispensary furnishes many outside cases, which are treated in their own homes, by the members of the fourth year class, under the supervision of Professor Wilcox, thus enabling the student to acquire the self-reliance and confidence so necessary to the beginning practitioner.

*Physical Diagnosis, Clinical Medicine.*

Lilienthal's Therapeutics.
Lippe's Repertory.
Farrington's Clinical Materia Medica.
Vierodt's Medical Diagnosis.
Abram's Manual of Clinical Diagnosis.
DaCosta's Diagnosis.

## SURGERY.

The course in surgery is so graded to extend through Sophomore, Junior and Senior years. It consists of didactic lectures, clinical demonstration and actual work by the students of Senior and Junior classes, as they are given one month's work each or more in dispensary clinics every day under charge of attending professor, and are held responsible by him for all emergencies and dressings. They also give all anæsthetics and attend to the post operative treatment. These advantages given our students cannot be excelled, and gives each member that opportunity of gaining for himself that valued knowledge and confidence which only comes by actual experience.

Two years ago the work in surgery enlarged. It now occupies two full years, the third and fourth, including the labors of four members of the college faculty. The work is divided into clinical and didactic surgery.

## EMERGENCIES AND BANDAGING.

(1) A course of lectures on surgical emergencies and bandaging is given the students of the Sophomore year in consideration of the means in administering first aid to the injured, also laboratory instructions of how to apply dressings, bandages, splints and the materials used.

## GENERAL AND SPECIAL SURGERY.

(2) The Juniors and Seniors are given two lectures each week on general and special surgery, during the entire two years, covering all the

surgical diseases, and special technique in operative surgery, especial attention being paid to pathology, diagnosis and treatment of each disease from a surgical standpoint in conjunction with the valued homeopathic application of remedies. Besides this the Juniors are given a special course on surgical anatomy and the Seniors one on surgical pathology.

### OPERATIVE SURGERY.

(3) During the Senior year the class will be instructed in the surgical laboratory in operations on the cadaver, in which the student is called upon to do the work under the special criticism of the professor in charge, thus perfecting themselves by actual practice with operations they will be called upon to perform in later years.

### CLINICAL SURGERY.

(4) The work in clinical surgery consists in operations before the class in connection with clinical lectures given upon the cases presented. These occupy each Monday of the fourth year, which is set apart as the day for clinics. The third year class is required to attend the clinics, unless their regular class work interferes.

At the Clinics which are held at the City and County Hospital, St. Luke's and St. Joseph's Hospitals, of St. Paul, and the City Hospital and Free Dispensary, Minneapolis, are demonstrated the value of antiseptic treatment of wounds, the minute details of the application of surgical appliances and dressings and operative technique. Post-operative care for reaction, shock, etc., are considered.

Senior students are instructed in the practical use of anæsthetics and are required to attend a number of surgical patients at their homes, carrying out post-operative detail under the direction of the professor.

The surgical department aims to give a complete and thorough course on the subject and its collateral branches.

It should be distinctly understood that examinations on the clinical and laboratory work, both sectional and at the end of the term, no matter by whom the teaching is done, are counted with the didactic course, the average of all combined constituting the student's standing in surgery for each year. The marks for the four years go to make up his graduation average.

### TEXT-BOOKS.

Park's Surgery.
Trene's Operative Surgery.
Wyeth's General and Operative Surgery.
Surgical Technique, by Von Esmarch and Kowalzig.

### DIDACTIC COURSE.

The didactic course covers the entire field of the principles and practice of surgery. The lectures will occupy the third year class two hours and the fourth year class three hours each week. Demonstrations will be made upon the cadaver, aided by models and charts.

The lectures to the third class will include surgical pathology, inflammation, hemorrhage, surgical appliances, surgical emergencies, minor surgical operations, ligation of arteries, burns and scalds, surgical treatment of the anus and rectum, antiseptics, anæsthetics, abscesses, ulcers, gangrene, hernia and the elements of the treatment of wounds, fractures, dislocations and amputation.

The lectures of the fourth year class will include the surgery of the bones, joints, genito-urinary organs, tumors, cysts, fractures, dislocations, amputations, syphilis, together with the operative surgery of the head, face, chest, abdomen, pelvis, skin, nerves and extremities.

All the lectures will aim to be comprehensive, practical, and in keeping with the best standards of advanced surgery.

### TEXT-BOOKS, DIDACTIC COURSE.

Parke's Surgery.
Homeopathic Text-Book of Surgery.
Mamline's American Text-Book of Surgery.
Bradford & Lovett's Orthopædic Surgery.
Pye's Surgical Handicraft.

## ORTHOPAEDIA.

The course on this subject is both didactic and clinical. It consists of one lecture a week during the fourth year.

The whole subject of deformities, their etiology, pathology, course and treatment is carefully considered in detail. Charts and drawings are used to illustrate the work. The mechanical apparatus used in the treatment of such cases is exhibited and rules laid down for the improvising and applying temporary means and instruments. Recent progress in the knowledge of the underlying causes of bony, muscular and habit deformities, and their serious reflex effects, has led to great changes in the methods pursued to overcome them. The early recognition and treatment of such cases are of the utmost importance, and, hence, as they are usually first presented to the general practitioner, a full knowledge of this branch of surgery becomes exceedingly valuable In the Dispensary Clinics the student sees carried out the teachings of the didactic course.

The subjects discussed include functional and organic diseases of the bony spine, the several forms of club foot, joint inflammations and deformities, both simple and tuberculous and their sequellae, cleft-palate, hare-lip, etc.

## OBSTETRICS.

This subject is taught by lectures and recitations, thoroughly illustrated with charts, manikins and specimens. The course will be graded and divided between the third and fourth years.

During the third year subjects covered will embrace the anatomy and physiology of the female generative organs and the pelvis, the development of the embryo, the maternal changes of pregnancy, the diagnosis of pregnancy, the physiology, pathology and hygiene of pregnancy, the physiology and the course of normal labor, the physiology of normal labor and the managment of the puerperium.

During the fourth year the following subjects are taught: the mechanism of labor, diagnosis and management of the various presentations, dystocia, complications of labor, physiology, pathology and the management of the puerperium, and obstetric surgery.

## CLINICAL OBSTETRICS.

This department instructs the fourth year students and applies practically the teachings of the department of obstetrics. An abundance of material is supplied by the dispensary and city hospitals of St. Paul and Minneapolis.

The student will be thoroughly educated to locate accurately the position and condition of the internal parts both in health and disease, the obstetric points of the pelvis, as well as the diameters, planes and curves, the presentation and position of the child and the methods of diagnosis, the stages and mechanism of labor, the management of normal and abnormal labors, the application of the forceps and the necessary steps in performing version.

Each member of the class will be assigned at least three cases of pregnancy, which he will be required to attend under the immediate direction of the professor of the chair.

During the last month of pregnancy of a case as assigned, the student in charge will report to the professor the patient's name, address, age, number of previous labors, date of first birth and last labors, date of quickening, condition of uterus, heart, lungs, bowels, kidneys, etc., and a detailed statement regarding the appearance of the patient, location of the foetal heart, position of the child, character and size of the pelvis.

At the time of labor the student will be required to keep a record of the following facts:

Number of the case, date, name, address, condition of the osuteris, height of presenting part, pulse rate and quality (ante and post partum), rapidity of foetal heart beats and where heard most clearly, presentations, position and duration of the first, second and third stage.

Also the sex of the child, the diameters of its head, weight, and length. The post partum condition of the uterus, servix and perineum.

An operative course on the female cadaver will also be given, demonstrating the operative technique in symphisiotomy and Cæsarean section.

## TEXT-BOOKS AND COLLATERAL READINGS.

Leavitt.
Lusk's Midwifery.
American Text-Book of Obstetrics.
Hirst's Text-Book of Obstetrics.
Grandin & Jarman's Midwifery.
Playfair's Midwifery.
Boisliniere, Obstetric Accidents.
Davis' Obstetrics.

## DISEASES OF WOMEN.

This course will consist of one didactic lecture during the third and fourth years and two clinics a week during the fourth year.

In the third year, both semesters, the anatomy, physiology and pathology of the pelvic contents and perineum are carefully described. The preparation of the patient for surgical operation, together with the necessary steps taken, the various surgical procedures as well as the medical treatment of all pelvic diseases, will receive minute attention both semesters of the fourth year.

The medical and surgical diseases of women will be treated in didactic lectures and recitations. The entire field of gynecology will be covered in the lecture room. As cases present themselves in the city hospitals of St. Paul and Minneapolis, the subject thus described will be demonstrated on the living subjects.

*Gynecology.*
Wood, Text-Book of Gynecology.

## DISEASES OF CHILDREN.

The course on this subject will consist of one lecture each week and three clinics to the fourth year students, and extending over two semesters. The clinics are full and afford an exceptional opportunity to study the common diseases of childhood. In the out door department many cases of exanthematous cases are treated by the members of the class.

The didactic course embraces a description of the normal development of infancy and childhood, natural and artificial infant breeding, signs and symptoms of hereditary syphilis, contagious and infectious diseases, tuberculosis, erysipelas, and the diseases of the respiratory and urinary organs; those of the circulatory, nervous and digestive systems, rhachitis and diseases of the skin.

## TEXT-BOOKS AND COLLATERAL READING.

Tooker's Diseases of Children.
Holt's Diseases of Children.
Fisher's American Text-Book of Diseases of Children.
Collateral reading—Cyclopedia of Diseases of Children.

## MENTAL AND NERVOUS DISEASES.

This course consists of twenty-eight didactic lectures, in the fourth year, and as many clinical demonstrations as material is presented at the dispensary and the City Hospital, Minneapolis. It is the aim of the chair to qualify the student to detect the earliest symptoms of insanity and diseases of the nervous system. During the session of 1905-6 each senior student spent 2 weeks in practical work among the insane at the Fergus Falls State Insane Asylum.

The anatomy and physiology of the brain and spinal cord are reviewed and particular attention is paid to the causes, development, characteristic symptoms and the pathological conditions of the diseases of the nervous system. The therapeutics, dietetics and direction of the personal care in each disease is especially elaborated.

Talcott's Mental Diseases.
Clouston's Mental Diseases.
Edinger's Anatomy of Central Nervous System.
Martin's Nervous Diseases.
Dana Text-Book Nervous Diseases.
Bigelow's System of Electro-Therapeutics.
Oppenheim's Diseases of the Nervous System.

Collateral reading—Hack Tuke's Dictionary of Psychological Medicine; Bevan Lewis Mental Diseases; Kirchoff's Handbook of Insanity; Ferrier's Localizations of Cerebral Diseases; Strumpell's Text-Book of Medicine; Hirt's Diseases of the Nervous System; Horseley's Brain and Spinal Cord.

## EXAMINATIONS

*Hygiene.*

Coplin and Bevan's Practical Hygiene.

Park's Hygiene.

Collateral reading—Richardson's Preventive Medicine; Buck's Hygiene and Public Health.

## ELECTRO-THERAPEUTICS.

This subject will be carefully taught. The physics of electricity will be sufficiently considered to enable the student to understand the construction and manipulation of galvanic faradic, sinusoidal and static batteries. The application of every form of electricity will be practically demonstrated.

## MEDICAL JURISPRUDENCE.

The object of this chair is to familiarize the student with his duties, rights and responsibilities from a legal standpoint. The law on each subject discussed is carefully explained and illustrated, as far as possible, with adjudicated cases.

*Medical Jurisprudence.*

Taylor's Medical Jurisprudence.

Herold's Manual of Legal Medicine.

Collateral reading—Hamilton's American System of Legal Medicine; Withaus' and Becker's Medical Jurisprudence and Toxicology; Wharton and Stille's Jurisprudence.

## OPHTHALMOLOGY.

In the department of ophthalmology the endeavor is to give thorough instruction in those parts of the work which will ordinarily come into the hands of the general practitioner.

The course is supplemented by as much practical work as time allows, in the use of the ophthalmoscope for the study of intraocular troubles, whose recognition would aid in the diagnosis of various conditional affections; and following a short didactic course given early in the year on the subject, practical work in the correction of the refraction is carried on at the dispensary during both semesters.

The clinical material provided in the department is very abundant, interesting and instructive cases, embracing all varieties of eye troubles calling for medical and surgical aid being presented to the students bi-weekly throughout the entire year.

The following schedule shows the subjects considered in the present course of lectures:

Anatomy and physiology of the eye; refractions and use of the lenses for the correction of its errors; diseases of the lids; conjunctiva; cornea; sclera; lachrymal apparatus; iris and ciliary body; lens choroid; retina and optic nerve; affections of the muscular apparatus of the eye and the general relationship between eye-strain and reflex and nervous disorders.

The didactic course consists of thirty-two lectures during the fourth year and ten during the third year.

*Ophthalmology.*

Norton, Buffum, Swanzy, Noyes.

Collateral reading—Fuch's Diseases of the Eye.

## DISEASES OF THE NOSE, THROAT AND EAR.

The course will consist of didactic lectures and clinical demonstrations.

One didactic lecture a week will be given to students of the third year. An understanding of the anatomy and physiology of the organs is presupposed, and but little time will be devoted to the review of the more important points in their bearing upon diseases of these organs. The lectures will enter upon the diseased processes in the nose—the various forms of acute and chronic catarrhal inflammation, their courses, developments, symptoms, consequences and treatment, both general and local, abnormal growths, affections of the septum and diseases of the accessory sinuses, finishing the course on the nasal cavities with the neuroses, functional and organic.

The diseases of the noso-pharynx are treated with special reference to their dependence upon nasal conditions and their influence upon the organ of hearing. The course includes acute and chronic catarrhal processes, adenoid vegetations and morbid growth.

Diseases of the pharynx are considered in their dependence upon alimentary disorders, acute and chronic inflammatory conditions, morbid growths and neurosis, together with the pharangeal and tonsilar conditions incident to the exanthamata, diptheria, typhoid fever, etc.

In the laryngeal disorders we become more closely associated with respiratory diseases; the various forms of laryngeal inflammation, morbid growths and nervous affections will be discussed—especial stress being put upon the early laryngeal manifestations of tuberculosis and the laryngeal disorders of voice users with the importance of proper vocalization and respiration upon all diseases of this organ

Ear diseases resolve themselves into: Diseases of external canal and pinna, dermoid inflammation: diseases of the middle ear: mucous inflammation: diseases of the internal ear: serious and nerve inflammation.

The course to the fourth year students will be entirely clinical, the class being divided into sections for dispensary work; the aim will be to familiarize the students with tee use of the various diagnostic means at their disposal and the appearance of the various abnormal conditions, together with the technique of the numerous operative procedures. The material for clinical demonstrations is abundant

*Ear*: Barr.
*Nose and Throat:* Kyle, Bosworth, Ivins, McDonald.
*Nose, Throat and Ear*: Veshlaget & Hallett; McBride, Burnett.

## SKIN AND GENITO-URINARY DISEASES.

This course will consist of one didactic lecture and one clinic each week for students of the fourth year. It will include the diseases of the skin, syphilis and all genito-urinary affections.

The first semester will be devoted to a study of the diseases of the skin, the second to syphilis and venereal surgery. The dispensary clinics will be especially valuable in supplementing the work of the professor in the lecture room by familiarizing students with the appearance of the various forms of skin and venereal diseases. Each student is required to diagnose cases and treat patients under the supervision of the professor, thus giving him actual experience in administering remedies and using instruments. During the course of the year each student has personal charge of about fifty patients in this department.

### TEXT AND REFERENCE BOOKS.

*Dermatology*: Kippax, Stelwagon, Durhring, Dearborn.
*Genito-Urinary*: Carlton, Hoyne, Franklin, American Text-Book, Bumstead and Taylor.

## HISTORY AND METHODOLOGY OF MEDICINE.

The lectures given in this chair are an exposition of the philosophy and art of medicine by the historical method. The student is taught to see how in each age practice of medicine has been the outgrowth of the beliefs current regarding the nature of man. Give to a student the theories held by a people regarding the constitution of matter, the nature of mind and force, and he can accurately foresee the medical science such as people will accept. The unfolding of the world's thought in medicine sets homeopathy in its high place and gives the student an outlook much needed in the profession. The tendency of medicine has always been to over-estimate the material side of man's nature and to make innumerable hypotheses to explain disease. The conflicts in medicine have been the clashing, not of opposite sects, but of antagonistic systems of thought, and reconciliation is possible only on the grounds of higher science than that of mere sense knowledge. This ground is revealed in the history of the philosophy of medicine.

The course includes the medicine of the Egyptians, Persians, Indo-Chinese, Hebrews, Greeks, Arabians and of Europe down to the present.

One lesson each week during the freshman year.

## EXAMINATIONS.

Examinations will be conducted at the end of each year, upon subjects taught during the year, according to the schedule printed elsewhere. Attendance upon at least four-fifths of the lectures under each department is required in order that a student may be allowed to enter for final examination, or to receive a certificate of attendance. Ten per cent. of the graduating class will be recommended to receive the degree of doctor of medicine, "cum laude." The selection will be based upon the efficiency of the work of the student during the period of the entire course.

## LIBRARY OF MEDICAL DEPARTMENT

Thomas G. Lee, B. S., M. D., Librarian

The Library consists of (a) The General clinical and reference Collection of some 4,000 books and bound periodicals, and thirty-four current periodicals; (b) The College Collections of the College of Homeopathic Medicine and Surgery, the College of Dentistry and the College of Pharmacy; (c) The Departmental Libraries, being special collections of books and current periodicals belonging to the Laboratories of Anatomy, Chemistry, Histology and Embryology, Pathology, Bacteriology and Physiology. In addition, the Libraries of the Hennepin County Medical Society, some 3,800 volumes and 50 Journals, and that of the Ramsey County Medical Society, some 4,500 volumes and 150 Journals, are accessible to the Medical student for reference work and collateral reading.

Other Libraries of value to the Medical student are the General University and other departmental libraries of 110,000 volumes the Minneapolis Public Library, 125,000 volumes; the St. Paul Library, 55,000 volumes.

## CLINICS

Every member of the faculty (with two exceptions) is a clinical teacher. Thus each professor demonstrates the application of his didactic work.

## DISPENSARY CLINICS

The dispensary, located at 1808 Washington avenue south, offers unusual facilities to the student for individual examination of patients. The location is within easy access of those whose means compel them to ask dispensary assistance, and presents ample opportunity for the study of all forms of disease usually met with in practice. Patients present themselves in large numbers daily (more than six thousand prescriptions having been made during the past year), and are assigned to particular departments, according to the nature of their diseases. The classes are so divided and arranged as to afford every student abundant opportunity to familiarize himself with the best methods of diagnosis and treatment of the various maladies, medical and surgical, with which the clinic abounds. Each student is assigned for a definite period as clinical assistant in each department of the clinic. The college clinics are conducted throughout the entire year. Students and practitioners are invited to attend them at all times.

## HOSPITAL CLINICS.

The college has unusual advantages in hospital clinics. In addition to calling upon students to assist the various professors in private cases regular clinics are provided in the city hospitals of both St. Paul and Minneapolis, and in St. Luke's and St. Joseph's Hospitals in St. Paul. Each Monday is devoted to clinics held in one of these hospitals by members of the faculty.

### CITY HOSPITAL, MINNEAPOLIS.

The faculty of the college of homeopathic medicine and surgery is largely represented on the staff of this institution, where one-fifth of all the patients admitted are placed under care.

### CITY HOSPITAL, ST. PAUL.

This hospital likewise has a full staff of homeopathic physicians and surgeons which includes all the St. Paul members of the college faculty. Each member of the staff has full charge of all cases coming into his department during his term of service and uses suitable ones for clinical purposes.

### ST. LUKE'S HOSPITAL, ST. PAUL

This hospital has recently erected a new building thoroughly equipped with all modern facilities for caring for medical and surgical cases. It contains an amphitheatre in which clinical lectures are delivered. A number of the faculty are members of the visiting staff.

### ST. JOSEPH'S HOSPITAL, ST. PAUL.

Through the addition to its staff of members of the college faculty, students have access to both surgical and medical cases upon exactly the same footing as the other hospitals.

### GENERAL REMARKS.

In all hospital work students are given special bedside instruction in diagnosis, in "taking the case," in prescribing, in surgical dressing, in the after care of patients and all forms of accessory treatment.

## DEGREES.

The degree of doctor of medicine is conferred by the Board of Regents upon students who are recommended, by vote of the faculty, for graduation.

Candidates for the degree must possess the following essential qualifications:

(1) Twenty-one years of age and upwards.

(2) Good moral character.

(3) A degree of preliminary education equivalent to that demanded by the examination for entrance to this college

(4) Four full college years spent in the study of medicine; the fourth year, at least, in this university, and the remainder in this or some other recognized college of medicine.

(5) Satisfactory examination passed in all branches in accordance with the foregoing rules.

## HOSPITAL APPOINTMENTS.

Graduates of this college are eligible for appointment to the position of interne in the Minneapolis City, St. Paul City and County Hospitals and St. Joseph's Hospital, St. Paul. Also to the staff of the State Hospital for Insane at Fergus Falls.

# Dispensary Clinics

MONDAYS; Surgery, Dr. Ahrens; Internal Medicine, Prof. Wilcox.

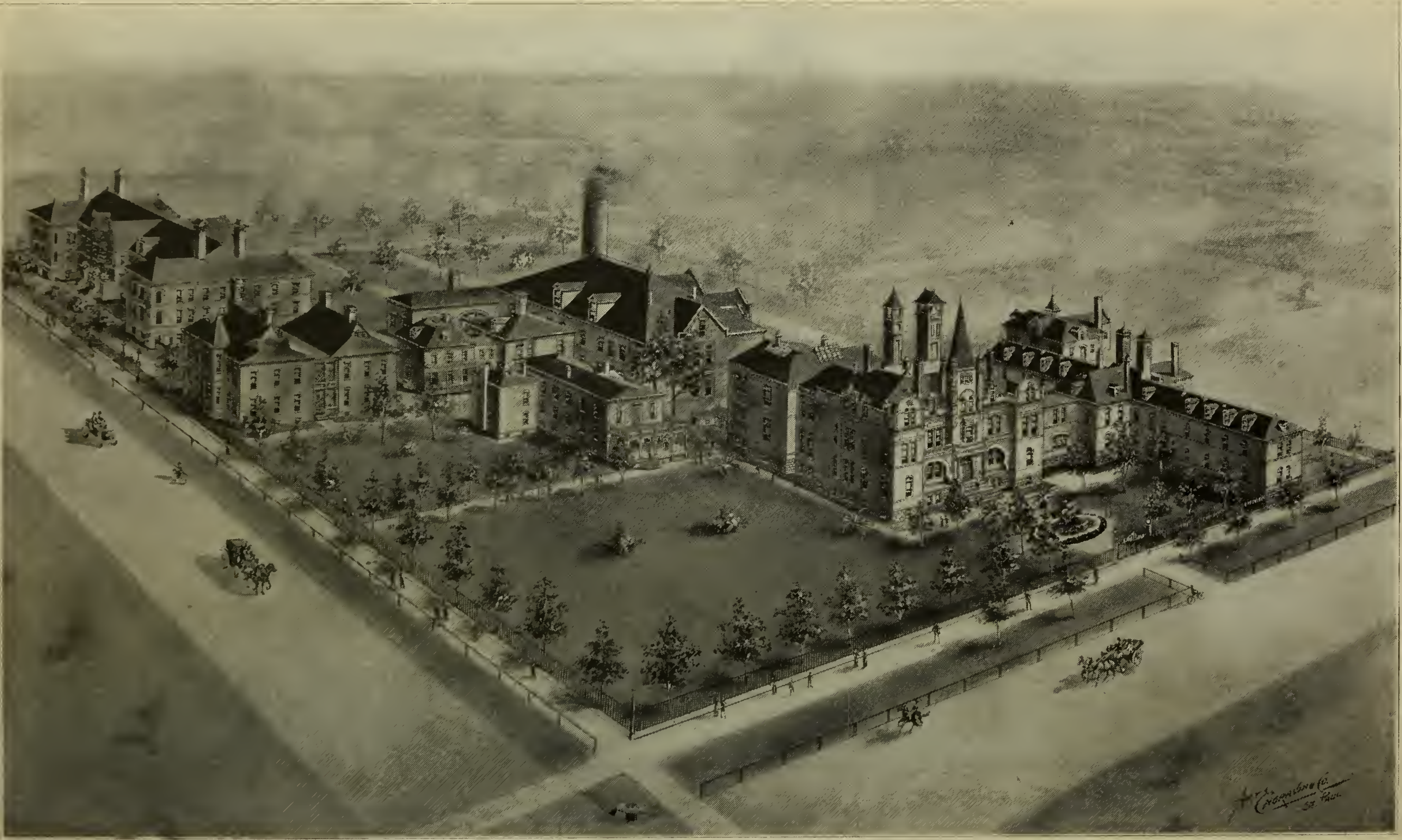
TUESDAYS; Internal Medicine, Dr. Smith; Gynaecology, Dr. Cobb; Eye, Prof. Leavitt. Skin and genito-urinary, Prof. Neill.

WEDNESDAY; Internal Medicine, Prof. Wilcox; Surgery, Prof. Matchen. Ear, Nose and Throat, Prof. Shipman.

THURSDAY; Internal Medicine, Dr. Skinner. Gynaecology, Prof. Turnstead. Children, Dr. Hamlin.

FRIDAY; Internal Medicine, Prof. Wilcox. Surgery, Prof. Booth. Eye, Prof. Leavitt.

SATURDAY; Internal Medicine, Prof. Horning. Children, Dr. Hamlin. Ear, Nose and Throat, Prof. Shipman. Surgery, Dr. Dawson. Physical Diagnosis, Prof. Lufkin.



St. Paul City and County Hospital

Minneapolis City Hospital

The College hereby acknowledges favors extended by Prof. R. S. Copeland of Ann Arbor, Michigan, for delivering the opening address, and to Dr. G. O. Welsh and his assistants at the Fergus Falls Insane Asylum for practical instruction to the Senior Class in Mental Diseases.

All communications pertaining to the College of Homeopathic Medicine and Surgery should be addressed to the Dean, Eugene L. Mann, A. B., M. D., 694 Endicott Arcade, St. Paul, Minn.

## THE ALUMNI ASSOCIATION

The Alumni Association of the College of Homeopathic Medcine and Surgery endeavors to keep in touch with tee College work and needs and is ever alert to assist the Faculty in all ways possible. It has been a potent effort for good in the past and its work is appreciated by the Faculty.

Officers for the present year: A. E. Booth, M. D., President, Andrus Bldg., Minneapolis; G. G. Balcom, M. D., Vice President, Lake Wilson, Minn.; Annah Hurd, M. D., Secretary-Treasurer, Pillsbury Bldg., Minneapolis.

University Committee: Ida Mackeen, M. D., Masonic Temple, Minneapolis; J. F. Beck, M. D., 1551 Franklin Ave., Minneapolis; C. Arthur Dawson, M. D., 2½ West Lake St., Minneapolis.

# Regulations Governing Admission to the College of Science, Literature and the Arts

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## EXAMINATION IN ENGLISH.

Every applicant for admission to this college must take an examination in Writing, Spelling, and English Composition. An examination will be given in two parts, the second of which is optional.

Part I. Elementary. Those who fail to pass this examination satisfactorily are required to take a special three-hour Preparatory Course in Rhetoric through their first year, or longer if necessary. This work will not receive credit toward a degree. Students pursuing it shall not take more than the maximum of seventeen hours of work a week, including this course. These students must take Freshman Rhetoric, but not until the preparatory work has been completed; but at any time during the first half of the first semester the Department of Rhetoric may transfer promising students from the Preparatory Rhetoric class to the regular Freshman Rhetoric.

Part II. Advanced. This is designed as a test of ability to express thought in a clear and orderly manner and of a fair knowledge of Elementary Rhetoric. This test is not obligatory: it may or may not be taken, as the student prefers. Those who do not take it, and those who fail to pass it with a grade of "Good" or "Excellent," shall be registered for Freshman Rhetoric as a required subject. Those who pass this test with a grade of "Good" or Excellent" are not required to take Freshman Rhetoric.

The entrance examination (both Parts I and II) will be given twice a year at the University in the Chapel in the Library Building, once on the next to the last Saturday in May at 9 a. m., and once on the Wednesday of examination week in September, at the same hour.

This examination will be sent also to the Principals of State High Schools and other accredited schools in the state, to be offered in each case at the option of such Principal, to members of the senior class who expect to enter the University. If, for the convenience of his students, the Principal elect to offer the examination, it must be given on the date assigned and under the rules which govern State High School Board examinations. All papers must be sent, immediately after examination, to the registrar of the University and will be marked by the proper University authority.

Students who enter the Freshman class after the regular September examination, without having passed either test in English, may be given a special test, if the Department of Rhetoric thinks fit, or shall be registered for Freshman Rhetoric, with the provision that, if found deficient during the first six weeks, they shall be dropped into the Preparatory Rhetoric class. Such students must be prepared to suffer any other change in registration necessitated by the program and the rules of the college.

## PREPARATION REQUIRED.

Graduates of the following courses, providing they present credits for four years of English and one year each of Elementary Algebra and Plane Geometry, are admitted to the freshman class without condition other than that imposed by the above examination in English:

(a) Any four-year course of a Minnesota State High School.

(b) A four-year course of other accredited schools in the state.

(c) A four-year course of schools in any other state accredited to the State University of that state.

(d) The advanced English or Latin Course of the Minnesota Normal Schools.

In all cases the character of the work and the time given to the respective subjects should be according to the following schedule:

### I. REQUIRED OF ALL.

*English,* four years, including

(a) Classics.
(b) Principles of Composition.
(c) Practice in Written Expression.

*Mathematics.*

(a) Elementary Algebra, one year.
(b) Plane Geometry, one year.

### II. ELECTIVE.

*Mathematics,* one year.

Higher Algebra, one-half year.
Solid Geometry, one-half year.

*Latin,* two or four years.

* Grammar, one year.
Caesar, four books, one year.
Cicero, six orations, one year.
Virgil, six books, one year.

*Greek,* two years.

Grammar, one year.
Anabasis, four books, one year.

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*Note—All students entering the College of Medicine and Surgery must present evidence of having completed the work in Latin indicated above.

*German,* two years.
  Grammar, one year.
  Literature, one year.

*French,* two years.
  Grammar, one year.
  Literature, one year.

*Spanish,* two years.
  Grammar, one year.
  Literature, one year.

*Swedish, Danish-Norwegian, Icelandic,* two years.
  Grammar, one year.
  Literature, one year.

*History,* three years.
  Ancient, to Charlemagne, one year.
  Modern, from Charlemagne, one year.
  England, one-half year.
  Senior American, one-half year.

*American Government,* one-half year.

*Political Economy,* one-half year.

*Physics,* one year.

*Chemistry,* one year.

*Botany,* one-half or one year.

*Zoology,* one-half or one year.

*Astronomy,* one-half year.

*Geology,* one half-year.

*Physiography,* one half-year.

*Commercial History* and *Commercial Law,* one year.

*Freehand Drawing,* one year.

*Mechanical Drawing,* one year.

*Commercial Geography.*

*Senior Arithmetic* and *Senior English Grammar,* as parts of a High School Normal course.

## SYLLABUS

The following statements indicate, in a general way, the ground expected to be covered in the study of the various subjects accepted for admission.

*English* (four years).

In order to secure a definite plan of study and unity of method on the part of preparatory schools, the entrance requirement in English is outlined below somewhat in detail. To satisfy this requirement a four years' course of not less than four hours per week must be pursued. The headings under which instruction will naturally fall are:

(a) English Classics
(b) The Principles of Rhetoric
(c) Practice in Written Expression

(a) English classics should include a critical reading, in class, of English masterpieces. The following are suggested as well adapted for such study: Shakespere's "Macbeth," Milton's "Paradise Lost," books one and two; Burke's "Conciliation with America": Carlyle's essay on "Burns." In the study of these works the student should come to know the leading facts connected with the author and his time; he should become familiar with the subject-matter of the work and thoroughly at home with the story, and should have a clear idea of the form and structure of the work as a whole.

A less critical knowledge of other standard or classic works, which may perhaps be read by the student at home, with written reports and brief oral discussions in class, is desirable. The following works are noted as indicative of the minimum amount of work expected: at least two of Shakespere's plays, beside the one read in class, one of Irving's works, one of Hawthorne's novels, one of Stevenson's novels, one of Webster's orations.

(b) The work in the Principles of Composition should include the principles and technical terms of ordinary texts upon the subject, whether acquired by the direct study of such texts or mainly by the study of selected English masterpieces. It should not be forgotten that this is not an end in itself, but simply a means of teaching the student the correct use of English.

(c) Not less than one hour each week throughout the four years of the high school course should be devoted to practice in written expression. The instructor may choose such topics as local conditions may require or make most profitable; but whatever line of work is pursued, the student should be taught to use language correctly and forcibly and learn to express himself clearly and logically in writing.

*Elementary Algebra* (one year)

Addition, subtraction, multiplication, division, factoring, highest common divisor, lowest common multiple, fractions, simple equations (with one, two, and several unknown quantities) followed by problems, theory of exponents, involution (including the binominal theorem for positive integral exponents), evolution, radicals, inequalities, ratio, proportion, progression, and quadratic equations, with problems.

*Higher Algebra, First Part* (one-half year)

While this subject does not include any topics not named under Elementary Algebra, a much fuller treatment of those topics is expected in this work. Principles as well as processes should be learned, theorems and rules should be rigorously demonstrated, the exercises and problems should be more difficult, and students should be drilled in short methods and rapid work. Unless candidates have a good knowledge of the fundamental topics named below, they are not prepared to pursue successfully at the University the second part of Higher Algebra

The topics are addition, subtraction, multiplication, division, factoring, highest common divisor, lowest common multiple, fractions, theory of exponents, involution, evolution, surds, imaginaries and simple equations with problems.

*Plane Geometry* (one year)

Any of the standard texts on this subject will furnish the necessary preparation. Isoperimetry, symmetry and minima of figures are not required. The exercises requiring solutions and demonstrations should not be omitted.

*Solid Geometry* (one half year).

Any of the standard texts on this will furnish the necessary preparation. The excesses requiring solutions and demonstrations should not be omitted.

*Latin Grammar* (one year).

This will include the subjects of orthography, etymology and syntax. Proficiency is particularly desired in the following subjects: the analysis of the verb forms, the rules of syntax, and the principal parts of the irregular verbs.

*Caesar* (one year).

First four books or selections from the seven books equivalent to four; or three books, with thirty pages of Cornelius Nepos, or two books with sixty pages of Cornelius Nepos. Special attention should be paid to the translation of passages of the text into correct and idiomatic English; grammatical questions connected with the text; more especially on the subjunctive mood, indirect discourse and the sequence of tenses. The pupil should be able to rewrite in oratio recta all the passages of oratio obliqua that occur in the text. The student is expected to be familiar with the life of Caesar and an account of his wars.

*Cicero* (one year).

Six orations, four against Catiline and any two of the following: "Poet Archias," "Ligarius," "Marcellus," "Manilian Law" (to count as two orations), the Fourteenth Philippic. The student should be fâmiliar with the life of Cicero and the history of his times.

*Virgil* (one year).

Six books of Aeneid, or five of Aeneid and one of the Metamorphoses of Ovid, or the Ecologues. The student should be familiar with the life of Virgil and an account of his times and writings. A correct rythmical reading of the text is to be encouraged.

*Greek Grammar* (one year).

*Xenophon's Anabasis* (one year)—Four books.

*German* (two years).

First year the pupil should acquire:

(1) A correct pronounciation, training of the ear, eye and organs of speech.
(2) A vocabulary of a thousand words of every day use; facility in combining these words into simple sentences. As a means to this, 100 to 150 pages of easy narrative prose and poetry should be read, from which questions and answers may be formed. To test the student's memory and knowledge of the word-order he should relate or write out the story anew in his own words.
(3) From two to three hundred German idioms.
(4) The essentials of German Grammar, to be taught by means of oral and written exercises based upon the reading lessons.

Second year—

(1) Read 150 to 200 pages of prose and poetry.
(2) Practice in reading smoothly and with expression.
(3) Carefully translate selected passages of the text into idiomatic English. **To translate easy sentences which the student already understands is a waste of time.**
(4) Translate sentences from English into German, using words and idioms of the text read.
(5) Study topically German grammar; chief rules of othography, etymology and syntax; illustrate these by words, phrases and sentences selected or composed by the student.

*French* (two years).

The principles of French grammar, including acquaintance with the verb, regular and irregular: an ability to translate easy English sentences into French and simple French prose into English.

*Spanish* (two years).

First year—Grammar and Reader.

Second year—Grammar reviewed; reading of some modern writer; composition and conversation.

*Ancient History* (one year).

(a) This study should begin with from five to seven weeks upon the oriental peoples who have most influenced European development, noting the early civilizations in the valleys of the Nile and Euphrates, the spreading and meeting of these civilizations in the intermediate region, with notice of the more important states in that district, and the union of the East under Persia. This survey should aim to give an idea of the reach of recorded history, of the distinguishing features of the successive oriental nations, and of their more important influence upon later European development.

(b) In the Greek and Roman age emphasis should be put upon the evolution of institutions, and considerable attention should be paid to the later Hellenistic period, after the rise of Macedon, and to the Roman Empire, with its bearing upon subsequent history. Some of the work should be illustrated by the use of sources, and maps should be used constantly.

(c) The subject should be carried down to the establishment of Charlemagne's Empire. This will bring together all the chief lines of influence which were afterwards to make our modern world, will show the meaning of the preceding eras as can not be done if the study stops at an earlier date, and will leave the subject at a period of comparative order and simplicity.

*Modern History* (one year).

From Charlemagne to the present. The topics to which special attention are called are the period of disorder after Charlemagne and the consequent rise of feudalism, the Holy Roman Empire and the papacy, the medieval church, the crusades, the free cities, the rise of national monarchies, the intellectual renaissance and the Protestant Reformation, the French Revolution and the subsequent democratic movements in politics and industry.

It is desirable to give at least half of the year to this last period from 1789.

Instead of these two subjects, Ancient and Modern History, the University will, until 1907, continue to accept the following:
History of Greece and Rome (one-half year).
Medieval (one-half year).
Modern History (one-half year).

*English History* (one-half year).

The Saxon period should be passed over rapidly. In the remainder of the work, besides the narrative, constitutional points should receive attention, and easily accessible documents, like Magna Charta, should receive careful study.

*Senior American History* (one-half year).

No attempt should be made to cover the whole field in this time. Either the colonial history or the period from 1783 to 1832 offers quite enough material. In any case considerable use should be made of collections or documents and sources.

*American Government* (one-half year).

This should be a study of our government, national, state and local, as it is organized and actually operated to-day. Students should be made familiar with the purpose and salient features of important instruments of government and other public acts like the Declaration of Independence, Articles of Confederation, Northwestetaoin shrdlu cmfwyp nup tion of the United States, Constitution of Minnesota, and a local city or village charter.

In no case, however, should the instruction consist wholly or largely of an analysis of documents. It should rather aim to impart information essential to intelligent, active citizenship, such as the division of the government into departments, their organization and function; the methods of nominating, electing and appointing men to office; of framing and amending constitutions, city charters and statutes; of drawing grand and petit juries and the duty of the citizen to serve on them; the distinction between common law, state law and constitutional law, between equity, civil and criminal cases.

To make the government seem a real working organization to the student, he should be encouraged to observe public proceedings by attending school meeting, town meeting, sessions of the county Commissioners, city council, state legislature, a trial in court, and party primaries and conventions. He should also be lead to read about and observe pubilc affairs for himself. To that end let him collect statistics and accounts of work done by particular offices and departments from published reports and by personal inquiry.

*Political Economy* (one-half year).

Some good elementary text book should be mastered. It is desirable that students be encouraged to study local and general economic phenomena and conditions. The time should be wholly devoted to the elements of the science of political economy. The beginner should not be confused with problems of applied economics such as tariff, trusts, bimetallism, etc.

*Physics* (one year).

It is suggested that the year's work be confined to four of the seven subjects mentioned below.

(1) Mechanics of solids, (2) liquids and gases, (3) sound, (4) heat, (5) light, (6) and (7) electricity and magnetism (to count as two subjects but not to be divided).

*Chemistry* (one or one-half year).

The full year's work should include a study of both the non-metals and metals with laboratory experiments illustrating the common chemical laws and the commoner chemical reactions.

The half year's work should cover the non-metals only, with laboratory experiments similar to the first half of the full year's work.

After the opening of the year 1906-07, the one-half year credit will not be accepted for admission.

*Botany* (one or one-half year).

Schools which give one-half year of Botany should devote particular attention to plant relations, making the course largely ecologic in bearing. When a whole year is given to the subject, additional work upon plant structures should be offered, and together with fundamental conceptions of ecology a general idea of morphology and taxonomy should be the aim of the course.

*Zoology* (one or one-half year).

work cannot be laid out along the line indicated above.

The course of Zoology, whether a half year or a year course, should be a natural history rather than a modern morphological course. Collecting and classifying (as a means) should be encouraged as much as possible. Animals should be studied as living units, in their relation to one another and their environment. The general and special structural feature in relation to the habits, the food and manner of obtaining it, the enemies and means of protection against them, hibernation, migration, the differences in habits, form and structure between the old or mature animal and the young, the relation of parents to their offspring, etc.—in short, all about the life of the animal under consideration should be the prominent feature, and as much as possible of this should be made out by direct observation of the animal in its natural home and in confinement.

The course, on the whole, should aim to foster and develop a love for nature, train the power of observation toward accuracy and give a healthful stimulation to the imagination. The pupil should be guarded against the habit of confounding the facts of observation with his interpretation and his judgments.

The animals for direct observation should be selected from as many branches of the animal kingdom as possible, and the changes during the year in the character of the fauna of the locality in general as well as as of some particular region should be noted. In some localities the work will of necessity be largely restricted to land and air animals, but no locality in Minnesota is so poor in animal life that very profitable

It will be noticed that such a course of necessity includes so-called laboratory work. The amount and extent of the laboratory work will depend upon conditions, but even under the best conditions it is hardly advisable to go into detailed dissections and embryology. Continued, repeated and close observation, aided now and then, by a simple hand lens or a compound microscope, will reveal an abundance of material and opportunity for disciplining the mind.

*Astronomy* (one-half year).

An elementary course in General Astronomy as presented in any good modern text-book.

*Geology* (one-half year).

These subdivisions should receive special attention: physiographic geology, which treats of the building of the land and the evolution of its existing contours: geo-dynamics, the study of the forces, atmosphere, water, terrestrial heat, plants and animals, modifying the earth; and a brief survey of historical geology.

*Physiography* (one-half year).

The following topics should be emphasized: Meteorology, to an orderly arrangement of the leading facts relating to the atmosphere, and its phenomena, including some acquaintance with the work of the U. S. Bureau; Land Sculpture, as it treats of the origin, development and decadence of land forms and the influence of these processes on the physical environment of man.

*Commercial Geography* (one-half or one year).

The work usually provided in high schools will answer this requirement.

An applicant not holding a diploma from one of the courses (a), (b), (c), or (d), indicated above, may be admitted by gaining by examination fifteen year-credits, including four years of English and one year each of Elementary Algebra and Plane Geometry, from the list of subjects given above.

State High School Board certificates will be accepted for the subjects which they represent.

The following High Schools are accredited:

- Ada
- Adrian
- Aitkin
- Akeley
- Albert Lea
- Alden
- Alexandria
- Amboy
- Annandale
- Anoka
- Appleton
- Argyle
- Arlington
- Atwater
- Austin
- Barnesville
- Belle Plaine
- Bemidji
- Benson
- Bird Island
- Blooming Prairie
- Blue Earth City
- Brainerd
- Breckenridge
- Browns Valley
- Buffalo
- Caledonia
- Canby
- Cannon Falls
- Cass Lake
- Chatfield
- Cloquet
- Cokato
- Crookston
- Dawson
- Delano
- Detroit
- Dodge Center
- Duluth
- East Grand Forks
- Elbow Lake
- Elgin
- Elk River
- Elmore
- Ely
- Eveleth
- Excelsior
- Fairmont
- Faribault
- Farmington
- Fergus Falls
- Fertile
- Fosston
- Fulda
- Gaylord
- Glencoe
- Glenwood
- Graceville
- Grand Meadow
- Grand Rapids
- Granite Falls
- Hallock
- Harmony
- Hastings
- Hawley
- Hector
- Henderson
- Herman
- Heron Lake
- Hibbing
- Hopkins
- Howard Lake
- Hutchinson
- Jackson
- Janesville
- Jordan
- Kasota
- Kasson
- Kenyon
- Lake Benton
- Lake City
- Lake Crystal
- Lakefield
- Lamberton
- Lanesboro
- Le Roy
- Le Sueur
- Litchfield
- Little Falls
- Long Prairie
- Luverne
- Mabel
- Madelia
- Madison
- Mankato
- Mantorville
- Mapleton
- Marshall
- Milaca
- Minneapolis
    - Central
    - East Side
    - North Side
    - South Side
- Minneota
- Montevideo
- Montgomery
- Monticello
- Moorhead
- Mora
- Morris
- Morton
- New Paynesville
- New Prague
- New Richland
- New Ulm
- Northfield
- North St. Paul
- Olivia
- Ortonville
- Osakis
- Owatonna
- Park Rapids
- Pelican Rapids
- Perham
- Pine City
- Pine Island
- Pipestone
- Plainview
- Preston
- Princeton
- Red Lake Falls
- Red Wing
- Redwood Falls
- Renville
- Rochester
- Royalton
- Rush City
- Rushford
- St. Charles
- St. Cloud
- St. James
- St. Louis Park
- St. Paul
    - Central
    - Cleveland
    - Humboldt
    - Mechanic Arts
- St. Peter
- Sandstone
- Sauk Center
- Shakopee
- Sherburne
- Slayton
- Sleepy Eye
- Springfield
- Spring Valley
- Staples
- Stewartville
- Stillwater.
- Thief River Falls
- Tracy
- Two Harbors
- Virginia
- Wabasha
- Wadena
- Warren
- Waseca
- Waterville
- Wells
- West Concord
- Wheaton
- White Bear
- Willmar
- Windom
- Winnebago
- Winona
- Winthrop
- Worthington
- Zumbrota

The following private schools are also accredited to the University:

- St. Mary's Hall, Faribault
- St. Paul Academy
- Shattuck Military Academy, Faribault
- Stanley Hall, Minneapolis
- Windom Institute, Montevideo
- Concordia College, Moorhead
- Pillsbury Academy, Owatonna
- St. Joseph's Academy, St. Paul
- St. Paul's College, St. Paul Park
- Holy Angel's Academy, Minneapolis

## ADMISSION TO ADVANCED STANDING.

1. From other colleges.

This college accepts records from all reputable colleges for credit to advanced standing. Such records are accepted as far as they are equivalent to the work done in this college. In bringing records from other institutions, the certificate must be upon the official blank of the institution granting the certificate, and should show:

(a) The subject studied; if a language, the books read, etc.

(b) The time spent upon each subject.

(c) Ground covered in laboratory work in case of laboratory subjects

(d) The result. It is sufficient to state that the subject was completed creditably.

Records from institutions whose entrance requirements are not as high as those of this college will not be accepted for equivalent rank. The credits to be allowed in such cases will be determined by the Enrollment Commitee.

2. From Minnesota Normal Schools.

Graduates of the "advanced graduate course" of a Minnesota State Normal School are admitted with advanced standing equivalent to one year's credit, and receive the degree of Bachellor of Arts upon completing in this college the following courses: freshman mathematics, two years of science from the subjects prescribed for the freshman and sophomore years, two years of language (not including English) from those years, sophomore rhetoric, and sufficient additional work to complete three full years of the college course. Such students will not be permitted to elect courses V and VII in Education, and before registering for the freshman mathematics they will be required to make good any deficiencies in their preparatory mathematics, under the regulations that apply to all other candidates for the bachelor's degree.

Individual graduates of the "advanced Latin course" (five-year) or of the "advanced English course" (five-year) of a Minnesota State Normal School, who, on the basis of maturity and ability, present certificates of special fitness from the president of the Normal School, will be admitted with advanced standing under the same regulation and proviso.

## ADMISSION AS UNCLASSED STUDENTS.

Whenever in the judgment of the Enrollment Committee an applicant presents satisfactory reasons for not taking the regular course, such applicant may be admitted as an unclassed student. He must take the same examinations or present the same credentials as are required of those who enter the freshman class. Exceptions can be made only upon vote of the Faculty.

Unclassed students must take the same number of hours as regular students, and, unless advanced standing is obtained through credits from other institutions, four-fifths of the work during the first year must be taken from subjects offered to freshmen. A new application must be made each semester to the Enrollment Committee.

## DAILY ROUTINE

The morning session begins at 8:30 o'clock; a general assembly of the faculty and students is held each day at 10:25 o'clock, at which there are brief and simple religious exercises. Work extends through six days of the week.

## EXAMINATIONS

At the close of each semester, examinations are held in the studies of that semester.

Students are reported as "excellent," "good." "passed," "incomplete," "conditioned," or "failed."

An "incomplete" must be removed within one month from the opening of the following semester or it becomes a condition.

A "condition" not made up before the subject is offered again becomes a "failure," subject to rules governing failures.

"Failures" must be pursued again in class.

A student who at any time is deficient in more than half a year's work, loses his class rank and is regarded as a member of the next lower class.

Students whose absences in any term exceed four weeks in the aggregate, are not permitted to take the term examinations without special permission of the faculty.

## FAILURE TO KEEP UP WITH THE CLASS.

Any student receiving conditions or failures in 60 per cent of the work the first semester shall be dropped from the rolls, and shall not be allowed to re-enter the University until the opening of the following year.

Any student failing to pass in one-half of the work of any year shall not be allowed to register until reinstated by action of the faculty upon recommendation of the committee on students' work.

## FEES

All students in the college, who are residents of the state, are charged an incidental fee of ten dollars a semester. Non residents are charged double the fee required of residents of the state, or twenty dollars a semester. No reduction is made for late entrance or leaving before the end of the semester. Save in the case of the first registration, the incidental fee is increased 25 cents for each day's delay in registration, beginning with the day set for recitations to begin. In addition to this fee, students who take work in laboratories are charged a sum sufficient to cover the cost of material and breakage. The following is a statement of fees charged per semester for freshmanyear; chemistry, \$5; botany, \$3; zoology, \$3.

# The University Summer School

This school begins shortly after Commencement and lasts about six o eight weeks. Courses are given in both Elementary and University work. These courses may be utilized to enable students to make up entrance deficiencies and to remove a portion of their academic work.

Full information concerning these courses may be obtained from the Registrar

# Courses of Study

## FOUR-YEAR COURSE IN SCIENCE, LITERATURE AND ARTS

### LEADING TO THE DEGREE OF BACHELOR OF ARTS.

**The degree of Bachelor of Arts will be conferred upon any student who completes, from the courses offered in this college, one hundred and twenty-six credits, in addition to the required exercises in Drill, Gymnasium and Physical Culture. A credit is one hour per week through one semester.**

**Of the courses selected five or more shall be long courses, and at least one long course shall be chosen from each of the following groups:**

(a) English, French, German, Greek, Latin, Rhetoric.
(b) **Animal Biology, Astronomy, Botany, Chemistry, Geology and Mineralogy, Physics.**
(c) **Economics, History, Philosophy, Politics, Sociology.**

No student shall receive credit for more than two beginning language courses save by special permission.

**A long course means an amount of work equivalent to not less than twelve credits in one department.**

**A double period in laboratory subjects counts as one credit-hour.**

The notation [n] indicates the number of exercises per week, and [n2] indicates the number of double periods per week.

### FRESHMAN YEAR.

*Mathematics* [3]—Required of all during freshman year.

(a) Second Part Higher Algebra and Trigonometry, for those who have entrance credits in First Part Higher Algebra and Solid Geometry.
(b) **Solid Geometry and First Part Higher Algebra for those who lack entrance credits in these subjects.**
(c) Freshmen who have an entrance credit in First Part Higher Algebra, but not in Solid Geometry, will take Second Part Higher Algebra the first semester and Solid Geometry the second semester.
(d) Freshmen who have an entrance credit in Solid Geometry, but not in the First Part Higher Algebra, will take First Part Higher Algebra the first semester and Trigonometry the second semester.

Note: First Part Higher Algebra and Solid Geometry cannot receive credits both for entrance and for freshman requirements.

***Rhetoric* [3] *Course* I.—Required of all who do not pass with a grade of "good" or "excellent" Part II. of the examination in Entrance English.**

Students who have had special preparation in Debate may, by consent of the Head of the Department, substitute Argumentation for Rhetoric.

*Preparatory Rhetoric* [3]—Required of all who do not pass Part I. of the examination in Entrance English. This does not give a University credit.

*Military Drill* [3]—Required of men.

*Gymnasium* [1, in two periods]—Required of men.

*Physical Culture* [3]—Required of women.

**In addition students shall choose from the following list a sufficient** number of subjects to make in the aggregate not less than fourteen nor more than seventeen credits. The subjects chosen must be continued through the year

*Animal Biology* [32]. Course I. General Zoology.

*Animal Biology* [32] Course II. Representatives of the phyla of the animal kingdom. May be pursued in connection with course I or independently by those with proper preparation.

*Botany* [32], Course I, Short.

*Botany* [32], Course II, first year of long course.

*Chemistry* [32], Course I, General.

*Elocution* [3], Course VII. To count for two credits.

***English*** **[3], Course I, and Course II.**

*French* [5], Course I, Grammar and translation, composition and conversation.

*French* [3], Course III, Beginnings of French literature and translations from modern authors.

*French* [5]. Courses III and IV.

*German* [5], Course I, Grammar, translation, pronunciation, conversation and composition.

*German* [3], Course IV, Advanced, third year's work.

*German* [5], Courses IV and V.

*Greek* [5], Course I, Grammar, Anabasis and composition. Course II may be pursued at the same time to advantage.

*Greek* [1], Course II, Composition.

*Greek* [3], Course III, Oratory and history.

*History* [3], Course I, 31 B. C. to 1500 A. D.—Open to students with less than two years of preparatory history.

*History* [3], Course II, English Constitutional. Open to students who have completed the equivalent of course I.

*Latin* [3], Courses I (Livy), II (Cicero), III (Plautus and Terence), IV Selections.

*Scandinavian* [5], Course I, Grammar and composition; practice, including writing, speaking and translating Swedish.

*Scandinavian* [5], Course II, Grammar and composition; practice. including writing, speaking and translating Danish—Norwegian.

*Scandinavian* [3], Course III, History of Scandinavian literature and study of authors.

*Spanish* [5], Course I, Grammar and composition, conversation and translation.

## SOPHOMORE YEAR.

*Rhetoric* [3]—Required of all who took Preparatory Rhetoric in the freshman year. It counts for freshman and not sophomore credits.

*Military Drill* [2]—Required of men.

In addition to Military Drill sophomores shall elect not less than fifteen nor more than eighteen credit-hours of work from the subjects open to them. See departmental statements.

## JUNIOR AND SENIOR YEARS.

The work of these two years is entirely elective, it being provided that no student shall elect less than fifteen nor more than eighteen hours of work in any semester, save by permission of the Committee on Students' Work.

1. Students who carry Military Drill [3] beyond the required two years will be allowed two semester credits for each year; but no credit will be allowed for such Drill for less than one year.

2. Seniors contemplating entering the Medical Department are permitted to elect the courses in Anatomy, Chemistry, Histology and Physiology (it being understood that no repetition of work is allowed) in the Medical Department. The work completed in any or all of these departments will be applied toward the work required for a degree in this college.

3. Members of the senior class of this college are permitted to elect throughout the senior year, work in the College of Law, including the Elements of Contracts, Domestic Relations, Torts and Criminal Law. The satisfactory completion of the above named courses will give the student twelve senior credits, and will entitle him to admission to the middle class of the College of Law. No student will be permitted to take more than one lecture each day in the College of Law, without special permission of the faculty of this college. The work must be taken with the night class in the College of Law.

# Students

Newkirk, Bertha G. 1026 29 Ave., N. E. ........................ Minneapolis.
Smith, Homer R., 1523 University Ave., S. E.................. Minneapolis.
Pond, Samuel B., 1527 N. Emerson Ave., ...................... Minneapolis.
Rand, W. J., 1808 Washington Ave., S. ......................... Elk River.
Cooper, M. D., Hopkins, Minn. ............................ Hopkins, Minn.
Meierding, W. H., 1020 13 Ave., S. ............................ Minneapolis.
May, H. W, 1522 9th St., S. E., ................................ Minneapolis.
Smallwood, J. T., 1312 5th St., S. E., ..........................Worthington.
Wilder, K. W., 3207 Queen Ave., N. ............................ Minneapolis.
Sinclair, A. D. 615 16th Ave., S. E., ........................... Minneapolis.
Dussma, H. D., 212 Church St., S. E.,.................................Waconia.
McKeown, E. W., 217 State St., S. E., .............................. Chatfield.
Skaien, E. C. 323 Beacon St., ..................................Postville, Ia.
Dorr H. B., 619 16th Ave., S. E., ....................................St. Paul.

# Recommendation for Admission to the College of Homeopathic Medicine and Surgery of the University of Minnesota

1906-1907

FROM

(Name of School)

This is to certify that

(Name of Applicant)

who { *graduated from / left } this school on the ..... day of 190

has satisfactorily completed all the requirements for admission as given herewith, and is hereby recommended for admission to the College of Homeopathic Medicine and Surgery.

*Cross out the words that do not apply to the candidate.

In cases where the study was not pursued in this school, state facts in column for remarks.

The required subjects are given first, but the extent to which the other studies have been pursued must be indicated.

| STUDIES | STANDING | TIME IN WEEKS AND HOURS PER WEEK OR IN UNITS | TEXT BOOKS | REMARKS |
|---|---|---|---|---|
| English 1st year [1] | | | | |
| 2nd year [1] | | | | |
| 3rd year [1] | | | | |
| 4th year [1] | | | | |
| Algebra [1] | | | | |
| Plane Geometry [1] | | | | |
| Latin Grammar [1] | | | | |
| Cæsar [1] | | | | |

## Seven One Year Credits to be Chosen from the List Given Below

| | | | | |
|---|---|---|---|---|
| LATIN Cicero [1] | | | | |
| Vergil [1] | | | | |
| GREEK Grammar [1] | | | | |
| Anabasis [1] | | | | |
| GERMAN Grammar [1] | | | | |
| Literature [1] | | | | |
| FRENCH Grammar [1] | | | | |
| Literature [1] | | | | |
| SPANISH Grammar [1] | | | | |
| Literature [1] | | | | |
| HISTORY English [½] | | | | |
| Senior American [½] | | | | |
| Ancient, to 800 A. D. [1] | | | | |
| Modern, from 800 A. D. [1] | | | | |
| Civics [½] | | | | |
| Political Economy [½] | | | | |
| Physics [1] | | | | |
| Chemistry [½ or 1] | | | | |
| Astronomy [½] | | | | |
| Botany [½ or 1] | | | | |
| Zoology [½ or 1] | | | | |
| Commercial Geography [½] | | | | |
| Physiography [½] | | | | |
| Geology [½] | | | | |
| Solid Geometry [½] | | | | |
| Higher Algebra [½] | | | | |

## Studies Pursued in College Course

| | | | | |
|---|---|---|---|---|
| MATHEMATICS | | | | |
| Higher Algebra, 1st Part | | | | |
| Solid Geometry | | | | |
| Higher Algebra, 2nd part | | | | |
| Plane Trigonometry | | | | |
| LANGUAGE | | | | |
| English | | | | |
| Rhetoric | | | | |
| Latin | | | | |
| LANGUAGE | | | | |
| German | | | | |
| French | | | | |
| Greek | | | | |
| Scandinavian | | | | |
| Spanish | | | | |
| HISTORY | | | | |
| SCIENCE | | | | |
| Botany | | | | |
| Chemistry | | | | |
| Zoology ... | | | | |

[*Signature of Principal or Dean*]

Date......

Newkir
Smith.
Pond, S
Rand.
Cooper,
Meierdi
May, H.
Smallw
Wilder,
Sinclair.
Dussma
McKeow
Skaien,
Dorr H.

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